



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

SARDINIA

And its RESOURCES.



ROBERT TENNANT

Ital 5307.6



Harvard College Library

FROM THE

SUBSCRIPTION FUND,

BEGUN IN 1858.

10 July, 1895.



SARDINIA

AND

ITS RESOURCES

BY

ROBERT TENNANT



ROMA

LIBRERIA SPITHÖVER

1885

LONDON

STANFORD, CHARING CROSS

~~I 4808~~

Ital 5307.6



Subscription fund.

THIS VOLUME
UPON
SARDINIA AND ITS RESOURCES
IS
BY MOST GRACIOUS PERMISSION
RESPECTFULLY DEDICATED
TO
HIS MAJESTY THE KING OF ITALY

BY HIS MOST OBEDIENT AND HUMBLE SERVANT

ROBERT TENNANT

ROME

June 1885.

PREFACE

Some explanation for venturing to bring the following pages before the Public seems to be needed.

The Author was intrusted with a Commission in connection with commercial enterprizes in Sardinia, which necessitated a personal visit to the Island of some months duration, and, in the discharge of that duty, he had to penetrate all parts of the country, he was brought into direct personal communication with the Provincial and Communal Authorities and principal landowners and merchants, and in almost every district the Public records and Official Statistics had to be consulted.

The best possible opportunities were thus afforded for obtaining authentic information as to the various resources of the country, its agriculture, mines, forests, fisheries, railways, manufactures and general commerce.

Whilst thus engaged no thoughts of "writing a book," were present to the author's mind, and it was not till his labours were nearly completed, that the suggestion was made, that the materials were at hand for presenting to the Public some trustworthy descriptive particulars of a Country which was a *terra incognita* almost, though one of the oldest and most interesting countries in the world.

The suggestion was a tempting one, but doubts and difficulties arose, and it was not without much diffi-

dence and many misgivings that the task was undertaken. It was felt that a mere resumé of statistical information, however carefully compiled and deftly put together, would meet a very limited demand, and that something more was needed to render such a book attractive to the generality of the reading Public; and it occurred to the Author, that, as he had made himself generally acquainted with the institutions and antiquities of the Island, and as at the various places he had visited, and when the guest of friendly residents, he had taken part in their social games and festivities, had attended their fêtes and public ceremonies, and, being a keen sportsman, had always joined their hunting excursions, (many a "*Caccia grossa*," after moufflon deer and wild-boar having been arranged for his amusement) here were to be found the materials for the "missing link," — and he has accordingly interwoven such social and sporting descriptions prefaced with sketches of the history, institutions, and antiquities of the Island, as seemed to him best adapted for supplying what was felt to be wanting.

The Author is very conscious of the many imperfections of his work — arising from his own unskilfulness in the task he has undertaken. He can only plead in defence, that this is his first essay; and that whatever the demerits of the book may be, it will at all events have the merit of giving a reliable description of the state and condition of a country, of which very little is generally known, and in which there is much that is specially interesting.

ROME —

March 1885.

TABLE OF CONTENTS



DEDICATION AND PREFACE. Page 1 to 3

CHAPTER I.

Introductory - Situation - Resumé of History - Abo-
-rigines - Libyans - Iberians - Trojans - Canaanites - Phoe-
-nicians - Carthaginians - Romans - Vandals - Saracens -
Pisans - Genoese - Giudici - Spain - Austria - Savoy - and
Italy. Page 3 to 16

CHAPTER II.

Christianity - Introduction - First Bishops - Church-
Establishment - Priest-hood - Tithes - Education - Mona-
-steries - Convents - Jesuits - Inquisition - Celebrated Citi-
-zens - Tigellius - Deacon Hillary - Bishop Lucifer - Popes
Hilary and St. Symmachus - La Frasso - Azuni - Mario -
Historical Events - Bonaparte - Lord Nelson - Garibaldi.
Page 17 to 28

CHAPTER III.

Geological formation - Physical aspects - Mountains -
Rivers-Lakes - Stagni - Seasons - Winds - Climate - Malaria -
Salubrity. Page 29 to 38

CHAPTER IV.

Antiquarian Remains - Division - Nurhags - Sepulture dei Giganti - Perdas fittas - Perdas lungas - Walls - Cells - Temples - Grottoes - Idols - Tombs - Coins - Vases - Scarabees - Ornaments - Armour - Ancient Cities - Roads - Milestones - Monuments - Inscriptions - Cathedrals - Churches.
Page 39 to 59.

CHAPTER V.

Population - Language - Classes - Nobles - Ecclesiastics - Lawyers - Doctors - National, Provincial, and Communal Representation - Laws and their Administration - Feudalism - Land transfer - Taxation - Import and Exports.
Page 61 to 74

CHAPTER VI.

Land - Extent - Proprietorship - Tenure - Division - Mode of Letting - System of cultivation - Ploughing - Sowing - Harrowing - Harvesting - Thrashing - Wheat - Barley - Oats - Beans - Peas - Cattle - Sheep - Goats - Pigs - Mules and Asses - Horses - Government Stud - Vines - Olives - Oranges and Lemons - Fruits - Flowers - Vegetables - Tobacco. Page 75 to 93

CHAPTER VII.

Forests - Extent - History - Oak - Ilex - Cork - Poplar - Birch - Ash - Walnut - Chestnut - Maple - Bark - Charcoal -

Cork - Ashes - Guardie Forestali - Government Supervision -
Forest-laws - Rain-fall - Suggestions . Page 95 to 108

CHAPTER VIII.

Mines - Mining Laws - System of working - Lead and
Silver - Manganese - Zinc - Copper - Iron - Coal and Lignite -
Nickel - Marble - Granite - Clay - Porphyry - Agates - Sar-
-donyx - Cornelian - Amethyst - Roman workings - Present
condition - Future prospects. . . . Page 109 to 124

CHAPTER IX.

Trades industries and Manufactures - Salt - Wine - Oil
- Flour - Cheese - Butter - Honey - Soap - Potash - Alkali -
Soda - Pottery - Tanning - Lime-burning - Brick making -
Gunpowder - Lucifer matches - Beer and Aerated waters -
Handicraft-trades - Labour Page 125 to 144

CHAPTER X.

Railways - Origin - Cavour and Depretis - Con-
-cession - Formation of Company - Its history - English
Contractors - Fresh Convention - Completion of main lines -
Future extensions - Administration - Permanent Way -
Traffic - Locomotive - Working expenses - Government ar-
-rangement - General remarks . . . Page 145 to 176

CHAPTER XI.

Festivals - Origin - Religious services - Feasting -
Reunions - Easter Ceremonies - Santa Maria - Valverde -

Sant'Efisio - La Madonna del Mateno - Vergine dei sette dolori - San Priamo - Maggio - Saint John - La Varda - Correiolei - Grammatigu - Compare e Comare - Superstitions - Las Spungas - Accabatura - Tarantula - Sardonic Grin - Timoria - Relics - Heathen customs and English Fairs Page 177 to 192

CHAPTER XII.

Sporting - Game - Moufflon - Red Deer - Fallow Deer - Wild-Boar - Hares - Rabbits - Bustards - Partridges - Patro Ruale - Woodcock - Quail - Snipe - Wildduck - Wild Geese - Eagles - Hawks - Vultures - Flamingoes - Caccia grossa - Campagna and Coast shooting - Trout and River fishing
Page 193 to 216

CHAPTER XIII.

Characteristics - Men - Women - Dress - Costumes - Manners and Customs - Theatres and Clubs - Servants - Horses and Carriages - Courtship - Marriage - Child-birth - Funerals Page 217 to 236

CHAPTER XIV.

Cagliari - Sassari - Iglesias - Tempio - Alghero - Bosa - Oristano - Nuoro - Macomer - Porto-Torres - Terra-Nova - Islands - Universities - Schools - Museums - Hospitals - Asylums - Public Buildings - Charitable Institutions - Workhouses - Water - Works - Houses - Streets and Drainage - Markets Pag 237 to 258

CHAPTER XV.

Miscellaneous - Mineral Springs - Natural Grottoes -
Rocking Stones - Roads - Hotels - National Games - Horse
Racing - Tirai de Pei - Shepherd's Hut - Ballo Tondo -
Music - Postal and Telegraph Service - Vendetta and Re-
conciliation - Similarity of Words - Guide Books - Correction
of errors - Thanks Page 259 to 292

CHAPTER XVI.

Recapitulation - Historical - Agricultural - Forestal -
Mineral - Industrial and Commercial - Education - Coloni-
zation - Taxation - Rates and freights - Suggestions - Con-
clusion Page 293 to 311

ENGRAVINGS

— 799 —

PAGE

- ✓ 3. Map of Sardinia.
 - ✓ 39. Nurhags Perdas fittas — Perdas lungas and Sepulture dei Giganti.
 - ✓ 51. Sarde Idols.
 - ✓ 53. Vases Coins Inscriptions and ancient Relics.
 - ✓ 55. Sarde Churches in the Middle Ages.
 - ✓ 77. Sarde Agricultural Implements.
 - ✓ 117. Masua and the Mediterranean.
 - ✓ 195. Moufflon.
 - ✓ 223. Sarde Costumes.
 - ✓ 225. Sarde Costumes.
 - ✓ 237. Cagliari (City and Port).
 - ✓ 253. Village of the Pisan period.
 - ✓ 312. Heraldic arms of Sardinia.
-

ISLAND OF SARDINIA



Cromo-lit. Epithover.



CHAPTER I.

Introduction — Situation — Resumé of History — Aborigines — Libyans — Iberians — Trojans — Canaanites — Phœnicians — Carthaginians — Romans — Vandals — Saracens — Pisans — Genoese — Giudici — Spain — Austria — Savoy — and Italy.

Sardinia is almost a "Terra incognita", and yet it is easily accessible, within a few hours' sail of Italy and a few days' journey of our own shores, and from its old historic associations, the grandeur of its scenery, the primitive character of its people, the number and variety of its antiquarian remains — dating back to remotest ages — and the speciality of its sporting attractions, it is well worthy the travellers' attention, and would amply repay a visit.

In order to give a general idea of the country, whose resources and customs are to form the subject of this volume, an introductory description of its situation, physical aspects, and climatic conditions, prefaced by a brief sketch of its history and institutions, has been thought' desirable.

Sardinia is situated between $38^{\circ} 52'$ and $41^{\circ} 17'$ north latitude and between $8^{\circ} 10''$ and $9^{\circ} 50''$ longitude east of Greenwich, and is 160 miles long, with an average breadth of 70 miles. Its superficial area is estimated at 10,000 square miles. It lies west off the mainland of Italy, at a distance of 100 miles, and, according to

Herodotus, Polybius, Pausanias and most ancient Historians, is the largest Island in the Mediterranean, though Strabo, Diodorus Siculus and others make it rather less than Sicily; but, as there is no official survey of either island, their relative sizes are conjectural and approximate.

Sardinia has had a checkered and troubled history extending over many hundreds of centuries, and, though it has held no prominent position in the annals of the World, it has been the object of perpetual intrigue and conquest, by many eastern and many western nations, from the earliest ages until the date of its acquisition by the Royal House of Savoy in the beginning of the last century.

It is to be regretted that Sardinia has had no native historian; there are several elaborate historical treatises and learned works in French and Italian, from which, by the hand of a Macaulay a highly interesting volume might be penned; this I have neither the pretensions nor the time to attempt, but I have gleaned some particulars, which will serve to give a general idea of its history and of the various vicissitudes through which it has passed.

The original name of Sardinia was Ichnusa, from its fancied resemblance to a "Footstep", and hence some ancient authorities have concluded that the first inhabitants were of Grecian extraction. There is, however, no confirmatory proof of this, and Pausanias and Diodorus Siculus (two of the most accurate of the old historians) concur, that the Libyans, under the leadership of Sardus, the son of Maceris — generally known as the "Theban Hercules", first colonized the Island, and gave it the name of Sardinia; and that this was the generally received opinion among the ancient Romans may be inferred from the fact that the first coins, struck and circulated during their occupation of the Island, had upon them the image and superscription of "Sardus Pater". No date can be assigned to this Libyan immigration, but it must have occurred at least two thousand years before the Christian era. Anterior however to this period, the Island was undoubtedly inhabited by an aboriginal popula-

tion, as evidenced by the many ancient monuments and other archaeological remains existing at the present day, which are peculiar to Sardinia, and are not found in any of the countries from which any of the earliest or subsequent colonists are supposed to have come, or to which others of their nation migrated.

The next arrivals in the Island according to some authors were a colony from Ceos, led by Aristenus their King, and accompanied by Daedalus, who joined them as they passed Sicily. They established themselves at Karalis (now called Cagliari, and the present capital of the island) but according to Pausanias, the first seat of Government was " Nora „ (not now existing) built by the Iberians, who succeeded the Libyans, while other ancient writers give precedence to the town of Olbia, (now in ruins, but formerly the residence of Cicero's brother, when he was Consul in Sardinia) which they record was built by the colony of Iolaus, the nephew of Hercules. According to the same writers, after these Libyans and Iberians (whatever their order of precedence), came a colony of Trojans, who formed part of the convoy of Æneas, but, having separated from the rest of the fleet, landed in the island and settled there. It is narrated too that, about this period, the Libyans again invaded the Island " furiously „, and devastated the country; and this is the first mention of the hard fighting and fearful struggles, which, soon after these times, began to form an almost uninterrupted record in Sardinian history.

The Island may however be said to be first *historically* known when colonized by the Phoenicians about 3500 years ago, though before that period there is strong ground for belief that some of the Canaanitish race, when expelled by the Israelites from " beyond Jordan „, migrated to this Country; for many of the " Sarde Idols „ that have been found in considerable numbers, are objects of Canaanitish worship, such as images of Moloch, Baal, and Astaroth, so frequently and emphatically denounced in the Old Testament.

The Phoenicians also left many unquestionable vestiges of their occupation behind them, in the shape of ruined Temples, urns, vases;

coins and images, which, from their variety and number, and from the fact of their being found in several districts of the island, would seem to demonstrate a somewhat lengthened possession; but there is no authentic record as to this, and indeed, at this period, a long interregnum, with no dates and no facts, occurs, and the next mention of the island is an attack upon it by the Carthaginians in the year B. C. 528. The Corsicans (of whom we then hear for the first time) came to the aid of the Sardes, and the Carthaginians were repulsed. Some years afterwards, in the days of Darius, King of Persia, another invasion was made under the command of Hasdrubal. It also was repulsed and the commander seriously wounded; but, not daunted by these reverses, the Carthaginians, B. C. 512, made another invasion, and taking the people by surprise, obtained possession of the island after great slaughter. The Corsicans retired to their homes, and the Iolese to the mountains, and from the latter, it is asserted, sprung the race of brigands which have infested the Island ever since until very recent times.

The Carthaginians in their treatment of the Sardinians exercised great cruelties, devastated their cornfields, destroyed their vineyards, and persecuted the infortunate people so grievously, during the whole period of the two centuries and a half of their occupation, that, when the Romans invaded the Island, they were welcomed as friends and liberators.

The first Roman expedition was in B. C. 259; it was led by Cornelius Scipio, who gained a signal victory over the Carthaginians, and in the year following another expedition, led by Sulpicius Paterculus, was again victorious.

The Romans at this time do not appear to have had any intention of permanently acquiring Sardinia; their object was, to vanquish the Carthaginians, in which they signally succeeded; but after the 1.st Punic War, when the mercenary soldiers of the Carthaginians revolted, and came over to the Roman standard, the idea of annexing the Island first presented itself. The Sardes however, after the terrible experience they had had of the Carthaginians, were not willing to

place themselves under another yoke: and determined to fight for their independence. An expedition under Titus Manlius Torquatus was despatched from Rome and gained a great victory, but the Sardes would not yield; two other expeditions followed, both of which were successful, and a temporary submission was the result.

In B. C. 227 a Roman Prætor (Marcus Valerius) was for the first time sent to Sardinia, but the Sardes soon broke out into revolt, and the Carthaginians sent a large army under Hasdrubal to assist them. The combined forces were, however, ignominiously routed by the Romans, and twelve thousand of the Sardes (including their chief Hiostus) were killed, and Hasdrubal, with 3200 other prisoners, was carried to Rome, and paraded in triumph. From this time there was a short interval of rest under the Roman rule, but in the next century the Sardes were once more in rebellion, and, assisted by the Baleares and by the Iolese, who came down from the mountains, they fought a great battle with the Romans, and were again defeated. Tiberius Sempronius Gracchus, who was in command, exacted a double tribute and took away above two hundred of the upper classes as hostages for future obedience.

During fifty years there was again comparative peace in the island, but in B. C. 114 it was broken by another revolt, which was quelled by Cæcilius Metellus.

Cæsar, on his return from his African conquests, B. C. 56, visited Sardinia, landing at the old town of Sulcis on the west Coast; and, having heard there that the inhabitants had harboured the fleet of Nasidius, (Pompey's admiral) he confiscated one half of the goods of the people, and exacted a penalty of 100,000 sesterces, and raised the annual tribute from one tenth to one eighth of the produce. Tribute was at this time paid in kind, Sicily and Sardinia paying it in corn, and Corsica in wax.

Shortly after this period, when Tiberius was Emperor, Corsica was separated from Sardinia and made into a distinct Province with its own Prætor; at this period too, Sardinia was first used as a place of exile; Tiberius, A. D. 19, having banished four thousand Jews there;

whose descendants remained in the Island for nearly 15 centuries until they were expelled by the Spaniards in A. D. 1492. From the time of Tiberius, for the unusually long period of nearly three hundred years there was again an interval of peace, and during this epoch the Island is said to have attained a height of civilization and prosperity that it has never since reached.

On the decline of the Roman Empire, Sardinia once more became the subject of periodical conflicts. In A. D. 318 it was, with Sicily and Corsica, taken by Constantine and annexed to Africa; and in the next century we find it under the dominion of Genseric, King of the Vandals; it is then over-run by the Goths and the Saracens, who pillaged the Churches, tombs, towns and monuments, destroyed the Aqueducts, roads and public works, and committed every other variety of wanton atrocity and destruction. This miserable condition of affairs was protracted till A. D. 774 when the victorious Charlemagne took Sardinia, and placed it under the nominal sovereignty of the Pope. This gift was confirmed by his successor Louis le Debonnaire, and had a most important influence over the future destinies of the country.

The people, however, continued to be subjected to perpetual invasions from the Moors, and the Pope (John XVIII) pitying their wretched state, and seeing his own inability to relieve them, preached a crusade against the Infidels, and promised possession of the Island to whomsoever should expel them.

The Pisans, who had at that time become a powerful Republic on the mainland, accepted the challenge, and were subsequently joined by the Genoese; and, in A. D. 1002, after many sieges and battles and great loss of life, the Moors were expelled and the victors entered into possession. They were not however allowed to remain long in quiet enjoyment, for though they increased the defences, and divided the Kingdom into four Governments, each presided over by a chief of their own nomination, yet, after a lapse of less than fifty years, the Island was again attacked by the Saracens who

defeated the combined armies of Pisans and Sardes, and in A. D. 1050 established themselves at Cagliari, under Musset their King.

The Pisans, though defeated, were not disheartened, and the next year another fleet and army were raised; Cagliari was retaken, the Moors were expelled and Musset taken prisoner. The quadruple Government was at once reestablished, the four Provinces being named Cagliari, Luogudoro, Gallura and Arborea, and their Governors (called Giudici) to whom were entrusted supreme powers in their own provinces, were greatly strengthened in their position and influence by marriages with several titled heads on the Continent; the daughter of one of the Giudici being married to the natural son of the Emperor Ferdinand.

This comparatively settled state of things continued for over two hundred years, during the whole of which period the Saracens were periodically harassing the Island by hostile incursions, and the Pisans and Genoese intriguing to expel each other. Towards the close of the 13th century the Papal See having quarrelled with the Pisans, transferred the sovereignty of Sardinia (for the Pope still retained the right conferred by Charlemagne to dispose of the Island as he thought fit) to the Crown of Arragon, and in A.D. 1324 the Arragonese under Alphonso IVth landed at the Gulf of Palmas with a large force, took the town of Iglesias, and marched to Cagliari. Many of the nobles, including the Malespinas, the Dorias, and others, joined the invading army, and, after a hard battle with the Pisans, Cagliari was taken. The nobles however soon became dissatisfied with the new Government and, headed by the Dorias, they joined the Pisans and the Giudici, and obtained dominion over the island. The successor to Alfonso was not content to let the kingdom thus slip from him, and in A. D. 1366 he landed with a large army, gained a complete victory over the Pisans, dethroned the Giudici, and resumed sovereign possession of the Country.

The nobles in their turn once more became restless and discontented, and, headed by the Dorias, they united with the Giudici,

surprised the Arragonese, drove them out of the Island, and re-established the former régime.

About this time (A. D. 1376) the plague visited the island, and carried off, it is said, more than one half of the whole population. Among the victims was Marian, the Giudice of Arborea (by far the most powerful of the four Governments), a man thoroughly detested by the people, and whose son, equally detested, was killed by his own soldiers. Marian was succeeded by his sister Eleonora, a most enlightened and brave Princess, to whom the Sardinians are indebted for some of the best of their existing laws and institutions, and who, leading her armies in person, gained many glorious victories, and reigned, universally beloved, for over a quarter of a Century, until she too fell a victim to the plague, when it revisited the Island A. D. 1403. This Princess was married to one of the Dorias, and their son succeeded; but her husband (who for plotting against the Government had been put into prison and escaped) joined the Arragonese, and they in A. D. 1416 again attacked, and reconquered the island, which with Sicily was then annexed to Arragon and upon Ferdinand's marriage with Isabella came under the dominion of Spain.

Upon Ferdinand's death, Sardinia became part of the possessions of Charles V.th of Austria, and this illustrious Monarch, in the midst of all the other numerous avocation that occupied his time and attention, did not altogether neglect Sardinia. In A. D. 1535 he made a personal visit to the Island, when on his way to Africa, and stayed for several days at Alghero, where his house now stands almost in the same state as when he resided there nearly four centuries ago. On the abdication of Charles (A. D. 1553) Sardinia reverted to Spain, and it was during this period of Spanish dominion under Philip II, that many of the defences and most of the fortified castles were built. These however did not prove a successful barrier against hostile invasions, for when the war of succession broke out, and Sardinia was besieged by the Archduke Charles, Cagliari in the South and Porto-Torres in the North were taken; and while thus contending with a foreign power, the unhappy Sardes were

engaged in a civil war amongst themselves and with their rulers, and the most fearful atrocities were being committed on both sides.

This troubled state of internal and external affairs fortunately lasted only for a few years, and was put an end to by the Treaty of Utrecht A. D. 1714, when Sardinia was, by the unanimous assent of all the powers, declared part of the dominions of Austria. It might not now have been unreasonably concluded, that this distracted Island would at last have enjoyed some repose, but three years had scarcely elapsed when Spain, in flagrant and direct violation of the Treaty and to the indignation of Europe, recommenced hostilities and Sardinia was of course selected as the object of attack. This audacious act however, was promptly resented; an Austrian expedition, under the Marquis de Leyden, was at once despatched, and without either losses or difficulties; expelled the Spaniards and resumed possession.

In the following year, A. D. 1720, the treaty of London was concluded, by which Sardinia was ceded to Victor Amadeus IV, who, on the same day, transferred Sicily to Austria in exchange for it, assumed the title of King of Sardinia, and from that time to the present, the Island has continued in the uninterrupted possession of the House of Savoy. Its troubles however were not yet ended. The destinies of its new Rulers, in their various vicissitudes of fortune, were shared by Sardinia, who stood loyal and faithful through them all, and the Sardes may well look back with proud satisfaction upon this last æra of their most eventful History.

During the Spanish and Austrian dominion in the Island very little was done or attempted for the benefit of the people, or the improvement of the Country, but Carlo Emanuele II on his accession began at once to interest himself in its internal administration, and general amelioration, and the Island again entered upon a period of quietness and prosperity; but it was not destined long so to continue, for when the French Revolution broke out, A. D. 1790 an invasion of Sardinia by the new Republic was threatened. The Court of Turin was at that time anxiously and fully occupied in the defence of its continental possessions, and was unable to send any reinfor-

cements or render any assistance; and the Island had to be left to its own resources. The Sardes however proved equal to the occasion, and not only stood loyal to their King, but armed themselves for defence at all points; and, when the French Admiral arrived with a powerful fleet, though he effected a successful landing at San Pietro, San Antioco and other places, yet he obtained no permanent footing in the Country; and, finding that the feeling in the Island was decidedly hostile, instead of favorable as he had been led to expect, he retired, but not without heavy losses both in men and boats.

After this most signal success, the Sardes were invited to Turin to receive congratulations and favours; all they asked was the re-establishment of their old parliamentary institutions, and this was promised; but unfortunately, owing to court intrigues and quarrels, the promise was not fulfilled, and a revolt ensued. The Viceroy and other officials were expelled from the Island, and when another Viceroy was appointed, and, accompanied by the Marquis de la Planargia, (who was one of the oldest Sarde nobles, and who had just been appointed Commander-in-chief) arrived in the Island they were sacrificed to the fury of the people.

This act of open rebellion could not of course pass unpunished, and another period of war and disaster would no doubt have commenced, had it not been for the direct intervention of the Pope, who, by earnest mediation and entreaty, brought about peace between the King and his subjects. From this time order and quiet again reigned in the Island till A. D. 1796 when the Savoy dominions on the main land were invaded by the French, and the King, (Carlo Emmanuele IV had then succeeded to the throne) and Royal family were obliged to leave Turin. By an almost providential coincidence, when they had reached Leghorn, they were met by a deputation of Sardes, which had been specially despatched by the Sardinian Parliament, to express their practical sympathy and allegiance by offering to the Royal family a home in Sardinia during their troubles, with all the assurances of security and defence which the island and the loyalty of its people could give. The offer was graciously and gratefully accepted,

and the King with the Royal household, accompanied by the Deputies, and under the escort of a British frigate, at once set sail for Sardinia, and on the 3rd of May 1799 landed at Cagliari amidst " transports of affection and unequivocal joy .

The King immediately began to interest himself in the affairs of the Island, and appointed his two brothers, the Dukes of Aosta and Monteferrato, chiefs of the Provinces of Cagliari and Sassari. In a few months, however, the political position on the Continent had so changed, that the King thought it his duty to return there, and it was arranged that the Duke of Aosta should precede and the Duke of Monteferrato should accompany his Majesty; and that his two other Brothers, the Duke of Genoa and the Count de Maurienne should take their places in the Island.

The journey commenced under bad auspices; the Duke de Monteferrato died before their departure, and soon afterwards, the King's only son, and sole hope of direct succession, also died, and the King being unable, by reason of a further change in the political position to enter Turin, or resume his sovereignty, and having lost also his wife, who had been his chief consolation, abdicated in favor of his brother, the Duke of Aosta; himself retiring to Rome, where he spent the rest of his life in acts piety and religion and died, quite blind, in the Jesuit Convent there A. D. 1819.

The Duke of Aosta (who reigned under the name of Victor Emanuel), the French being then in possession of the Continental States, returned to Sardinia and occupied himself in administering the internal affairs of the Island; principally interesting himself in the increase of the military marine, and the organization of a national militia, for defence against the attacks of the Tunisian corsairs, who were continually landing on unprotected parts of the Coast, and committing horrible depredations. The memorable year 1814 however soon arrived, when united Europe met at Paris, and amongst other restitutions, Victor Emanuel was restored to his throne and entered Turin amidst the acclamations of his subjects. The Queen, Maria Theresa, who had been left in Sardinia as Regent, soon afterwards

joined the King; and the Duke of Genoa was then appointed Viceroy. Meanwhile, however, Sardinia was passing through a most critical and disastrous period. The Tunisian pirates had made another descent on the Island, slaughtered many thousands of the inhabitants, and carried away as many more into slavery; and this disaster was followed by a total failure of the harvest, causing a famine and epidemic, which were more terrible and fatal than the slaughter and slavery that had preceded.

During this trying period the Duke of Genoa, whose presence was urgently needed at Turin, would not desert his post, and he remained in the Island till the crisis had passed and the public mind was reassured. When he left, he was replaced by a Lieutenant General, but he retained the rank of Viceroy, until he succeeded to the throne in 1821. Carlo Felice, (for such was his title on becoming King) always retained the most grateful recollection of Sardinia, and, when he revisited the island in 1829, he travelled through every district, and made himself personally acquainted with the various needs and resources of each. He died in 1831 and was succeeded by Charles Albert, representing a collateral branch of the House of Savoy: he abdicated in 1849 in favour of his son Victor Emanuel; upon his death in 1878, was succeeded by his son Humbert, the present King.

The history of these last reigns is part of the history of our own times, and the incidents, in so far as affecting Sardinia, are given in detail, when describing the special subjects to which they bear relation; it need only be mentioned here, that after the successive absorptions of Lombardy Tuscany and the two Sicilies, and upon the " general redistribution of continental seats ", Sardinia became an integral part of United Italy, and the title of its King was merged in the greater title of King of Italy.

Such shortly is the history of Sardinia, as handed down by traditions and gathered from historical Books and Records; but very little has been said or heard of the Sardinians themselves. And yet, during the whole of these troubled times, they had their own quarrels, family feuds, aggressions and internal wars, full of interesting events and

thrilling narratives, which would alone fill a large volume; but to attempt even a resumé, however brief, would be of no greater value or utility, than the history of the Saxon Heptarchy, which Milton contemplated writing, but, according to Hume, gave up in despair, exclaiming “ that the skirmishes of kites and crows as much merited a particular narrative as the transactions of these People. ”

CHAPTER II.

Christianity — Introduction — First Bishops — Church-Establishment — Priest-hood — Tithes — Education — Monasteries — Convents — Jesuits — Inquisition — Celebrated Citizens — Tigellius — Deacon Hilary — Bishop Lucifer — Popes Hilary, and St. Symmachus — La Frasso — Azuni — Mario — Historical Events — Bonaparte — Lord Nelson — Garibaldi.

Intimately associated with the History of the Island itself is the record of the eminent citizens, whom it has produced, and the Historical Events connected with it.

There is no authentic record as to the exact time when Christianity was first introduced into Sardinia. Some Sarde historians declare that Boniface, a disciple of our Saviour, was the first who disseminated the Gospel there, — that St. Paul and St. James visited the island in their journeyings, and that the Christian faith, soon after its establishment was "sealed," by the blood of several martyrs who died for the faith.

The cathedral records of Cagliari shew that St. Clement — another disciple of our Saviour — was the first Bishop in the Island; but the first *historical* evidence of an ecclesiastical establishment is the mention of a Bishop of Cagliari at the Council of Arles, A. D. 314; and that A. D. 594, in the time of Pope Gregory, Hospiton chief

of the Barbagians, (the most warlike and powerful of the Tribes,) and Zabard, the nominal Governor of the Island, were both converted to Christianity, and that many of the People at the same time embraced the faith which soon afterwards became general throughout the Island. The Church gradually obtained a political, as well as a spiritual, power, and during the regime of the "Giudici," under the Arragon dominion, the "stamento ecclesiastico," possessed equal powers with the other "stamenti," in the Sardinian parliament.

The Church establishment now consists of 3 Archbishoprics, 8 Bishoprics and 500 "Dignitaries," of the Church. The second order of the Clergy numbers about 1800; and the Vicars (equal in office to our Curates) with the rest of the Priests number 700, — giving a total of over 3000. There are 393 Parishes, but the number of Churches is nowhere given; few villages, however, have less than two or three, besides those belonging to the Communes, which are generally situated in remote districts, where service is only performed occasionally.

The entire number of Churches has been calculated at 2000; which, in a population of 650,000, would give a church to every 325 persons; and it may be incidentally mentioned here — as an interesting comparison, — that the number of ecclesiastics in England and Wales is not quite one in 770 of the population; in Russia it is about one in 376, and in Germany (where the Roman Catholic population has been estimated at five millions) it is one in 566 persons.

The non-residence of the "Rectors," or second order of clergy, is of far too frequent occurrence; they prefer living in the towns, and their absence is not only disadvantageous generally to the people, but entails many expenses on the Vicars, which, as they receive for their stipend only one fourth of the value of the living, they are ill able to defray, and are consequently obliged to have recourse to other employments to eke out a livelihood, — the inevitable result of which is the neglect of their clerical duties.

The priests are educated at the universities either of Cagliari or Sassari; a slight acquaintance with Latin and Italian, the

reading of the Church services, and a knowledge of the canons of the Church, and routine of Church ceremonials, comprise the " curriculum " of their education. All examinations as to the truth or falsehood of their faith, and even the reading of many Roman Catholic works, permissible in other Countries, are forbidden, and no means are afforded for obtaining information on general subjects; so that a priest, on assuming his position in a village, is but little qualified to undertake the educational and other parochial duties which properly devolve upon him; and hence, no doubt, to a great extent, arise the neglected state of the schools in most districts, and the prevalence of superstitious practices, — both of which are much to be regretted — These failings, however, must not be attributed to the Priests, and they are almost, if not quite, counterbalanced by their prominent virtues of kindness, charity and hospitality.

Very few members of the aristocracy adopt the clerical profession; it is left to the sons and relatives of the inferior nobility, and middle classes, as the one of few careers open to them without trouble and humiliation.

The priest-hood, as a body, is considered to be the wealthiest class in the Island.

The tithes paid to the clergy were formerly collected in kind, but are now converted into a money payment; and it is calculated that instead of one tenth, nearly one fifth of the produce is absorbed by the Church establishment. In the middle of the 17th century it is on record that the revenue of the Church was £. 30,000. a year, derivable from tithes, of which about $\frac{1}{6}$ th had to be paid to the Imperial government towards repairing roads, bridges, ports, etc.; but this arrangement was terminated when the tithes were abolished and a fixed payment substituted. The nominal amount of revenue is now estimated at £. 60,000 a year; but this is thought to be much below the actual sum paid, which is stated to be not less than four times that amount, exclusive of voluntary payments, such as offerings, alms, collections for festas, and other contributions leviable for devotional and religious purposes.

Monasteries were first established in Sardinia during the Pisan dominion in the 11th century, but most of them were suppressed under the Arragon dynasty, and the monks expelled from the Island, taking with them all their wealth and records. They, however, gradually reestablished themselves, and, in A. D. 1760, the monasteries numbered 299, comprizing 26 different orders; they were again reduced by Carlo Emanuele to 119, in which there were 2198 monks. In 1840, they were still further reduced, — then numbering 91 monasteries, having about 1100 regular monks, to whom might be added 300 lay brethren. At this time there were 16 convents of 4 different orders, in which were 260 nuns. Some years later, both monasteries and convents were disestablished and disendowed. A small number of the establishments are however still maintained in the island, but they are not recognised by the government as ecclesiastical institutions, and are entirely supported by private contributions. Compensatory payments are however made to those nuns and monks who, on entering the institutions, gave up their property, which then became part of the corporate fund, and on the disendowment, was confiscated with the other possessions.

The number and privileges of the priest-hood have been much curtailed of late years, and their influence over the masses of the people is said to be gradually weakening. Whether this change will tend to their eventual well-being remains yet to be seen, and will, to a great extent, depend on the spread of education.

Education has made great advance within the last twenty years. Elementary schools are now established in every part of the island, and are maintained entirely out of imperial funds. Education is free, but compulsory, and every child is now instructed in all the first rudiments of learning. Twenty years ago, not one person in thirty could either read or write; and indeed most of the middle-aged and nearly all the old inhabitants are at present in that deplorable condition.

The Jesuits were first introduced into the island by Spain, A. D. 1650, and they soon became a powerful and influential body,

usurping all the highest and best appointments; but in A. D. 1775 they were suppressed by a papal bull of Clement XIV. The income from their corporate property was then estimated at L. 10,000 a year. They were re-instated in A. D. 1822 by Carlo Felice, and further supported and encouraged by his successor Carlo Alberto and were placed by him at the head of all the colleges and seminaries, as well lay as ecclesiastical; but a few years afterwards the order was totally and finally suppressed.

The inquisition was established in Sardinia towards the end of the 15th century, during the Spanish dominion, but it never attained the power or influence it had in Spain, and after a somewhat protracted but languishing existence it gradually "died out" in the Island.

Sardinia cannot boast of having been the birth-place of any great number of famous persons who ever attained a world-wide reputation; but it has produced hundreds of patriots, warriors, priests, and lawyers, who were celebrated in the Island in their day and generation, and whose memory is deservedly held in the highest honour and esteem by their countrymen in the present day; their records alone would fill many interesting volumes.

The earliest historical mention of any Sardinian celebrity, whose reputation extended beyond the island, is that of Tigellius Hermogenes mentioned by Horace in disparaging terms, and designated as a "poet of little talent." In spite, however, of the great satirists sarcasms, Tigellius must have had considerable merit to have become, as he undoubtedly did, the welcome associate of the Emperor Augustus, and of his friend Mæcenas. At all events, Tigellius was confessedly a first-rate singer, for Horace describes him as "optimus cantator et modulator."

In the time of Pope Liberius, whose pontificate lasted from A. D. 352 to A. D. 363, two natives of Sardinia, Hilary the Deacon and Lucifer Bishop of Cagliari were deputed to plead the cause of the orthodox faith before Constantius at the Council of Milan. Their arguments in favour of the principles of Athanasius were so strong,

and so intemperately expressed, that the Arian emperor, by way of refutation, ordered Hilary to be scourged and Lucifer to be imprisoned. Both were subsequently banished. Hilary is said to have written a "Commentary on St. Paul's Epistles," and another treatise entitled "Old and New Testament Questions," — the first of which has frequently been published among the writings of St. Ambrose, and the second among those of S. Augustin. Lucifer, after suffering many hardships and cruelties in exile, retired, when the tyrant Constantins was dead, to his native island, where he founded the small sect of the Luciferiani.

Cagliari produced a still more famous ecclesiastic, Saint Hilary, who was Pope from A. D. 461 to A. D. 468, and who, before his elevation to the tiara, was Papal Legate at the Councils of Ephesus and Chalcedon. He established two libraries in St. John Lateran, and is said to have ordained at a single December ordination, as many as twenty-two bishops, besides twenty-five priests and six deacons.

St. Symmachus, who was Pope from A. D. 498 to 514, was also a native of Sardinia; he was born at Simagis, in the district of Oristano. He and the anti-pope Lorenzo were consecrated on the same day, Nov. 22, A. D. 498; the one in St. John Lateran, the other in St. Mary Major; but the anti-pope very soon was compelled to resign his pretensions. It was St. Symmachus who first ordered the "Gloria in excelsis Deo," to be sung in the mass every Sunday and on every festival of a martyr, — a custom continued to the present day. He also richly embellished the churches of Rome and it was he who excommunicated the Emperor Anastasio I, at the same time absolving his subjects from their oath of fidelity; and when Trasimond, king of the Vandals, exiled to Sardinia 225 of the orthodox bishops of Africa, Pope Symmachus supplied their wants, sending them yearly presents of clothes and money.

Early in the sixteenth century, Sardinia produced another bard, La Frasse, the only Sarde Poet, if Tigellius be excepted, who ever attained fame or eminence beyond his own country. For political

and private reasons, he left the island and retired to Spain, where he published at Barcelona (A. D. 1753) the most celebrated of his poems " *dies libros della Fortune di Amor.* ". It is referred to by Cervantes in *Don Quixote*, in the colloquy between the Curate and the barber, when overhauling the Knight's library; the former soliloquises thus: " This book " (opening the book in question) " is " composed by a Sarde poet; and by the Holy order I once received, " since Apollo was Apollo, and the Muses Muses, and Poets Poets, " so facetious and remarkable a work as this was never composed, " and in its peculiar line is the best and most unique of all this sort " which has ever come to light in the world. He who has never " read it has never read anything dainty, and I am more glad to " have found it than if any one had given me a cassock of Florence " cloth. "

In times nearer to our own, Sardinia produced Azuni, (who was born at Sassari in 1749, and died at Cagliari in 1827), the author of a very learned work on Maritime Law, which has become a universal textbook on that subject. A handsome marble statue is erected to his memory in the piazza at Sassari, his native city.

Approaching still nearer to the present time, last — but not least in English estimation — Sardinia was the birthplace of Mario, who for nearly half a century, was the idol of the British public.

Mario, whose real name was Giovanni Battista Matteo Mario, " Chevalier, " not " Marquis, " of Candia, was born at Cagliari in 1808, of a very distinguished family. His father was General di Candia, Governor of Nice, and his mother was a Grixoni of Ozieri. Mario had three brothers and two sisters. The eldest, Serafino, died many years ago; and the second, Carlo, who was a General in the Italian army, is also dead. The third brother, who was a Jesuit, is still living, but resides in strict retirement. Of the two sisters, one, who married the Chevalier Guirisi, is dead; and the other, who married the Chevalier Roich, is now upwards of eighty-two years of age, and is a charming old lady, in full possession of all her faculties; and delighted to converse with any one who

was acquainted with her favourite brother, Mario, of whom she is never tired of talking. She resides at Cagliari, in the ancient family palace of Di Candia.

Of the early days of Mario, little is known. Like many of his class, he entered the army as a cadet when very young, and was a handsome, dashing officer. He sang as an amateur, as so many voice-gifted Italians do, because it "came natural," to him and "he could not help it."

His sister narrates that, when his father was Governor of Nice, and Mario was quite a boy, Lord Byron was a visitor at their house, and frequently patted the future great tenor on the cheek, which made a great impression on the youth; not, as his sister says, because Byron was a lord, but because he was the famous great English poet.

Mario, first sang in public at Paris and the real reason for his leaving Italy, was disappointment in a love affair, and not pecuniary difficulties, as was generally supposed. When it became known that Mario was a professional singer, his noble relations ignored and discarded him completely, and it was not until many years had passed, and Mario had become famous, that his family made overtures for a reconciliation, which Mario, banishing from his mind the memory of their former conduct, readily accepted, and, after an absence of thirty years, re-visited his native island, where he was received by his relations and fellow-citizens with every mark of rejoicing and admiration. During his stay at Cagliari on his first and every subsequent visit, he never would sing either in private or in public; although his mother, his family and friends did all in their power to induce him to do so. He declared, however, that he would never sing in his native country, and to this determination he strictly adhered.

On one occasion, his fellow-citizens tried to persuade him to sing at the Cagliari theatre for the benefit of a charitable institution which was in great need of pecuniary assistance. The committee appointed to promote the performance, waited on Mario appealed to his "goodness of heart," and begged him to sing "just this once." Mario, in reply, asked them what was the largest amount of

money they expected to receive at the doors if he were to sing; and, when a good round sum was named, he produced his cheque-book, and wrote a draft for double the amount, and handing it to the committee, observed: " Here, gentlemen, is the sum wanted; please " to accept it as my subscription, but never trouble me again about " singing either in public or in private. "

Mario died at Rome in January, 1884, and his remains were interred in the family vault at Cagliari on the 5th of March, amidst general mourning.

In comparatively modern times Sardinia has been the scene of two interesting historical events, the narration of which should not be omitted; the small island of " la Maddalena ", lying north of the mainland, and only separated from it by a narrow tortuous channel, was the scene of both exploits. Here Lord Nelson made his head quarters from 1803 to 1805, while watching the French fleet in the harbour of Toulon; and it was here too, when attacking the same island in 1795 that Napoleon Bonaparte, then a young artillery officer, met with the first repulse in his long and successful career.

Lord Nelson, who had tried every device to induce the French admiral to leave Toulon, was at length rewarded, on the 17th January 1805 for his patient watching and perseverance, by signals from the frigate in the offing, that the French fleet had put to sea. It was a dark squally winters night; preparations for dances private theatricals, and other amusements were being made on board the different ships, when the stirring news was received and acknowledged, but when the signal " *weigh* " appeared, all was changed in a moment, the suddenness of the order being equalled only by the skill and celerity with which it was executed.

The passage was so narrow that only one ship could pass through at a time, and each was guided by the stern lights of the preceding vessel. — Within two hours the whole fleet was clear of the passage, and stood to the southward, in pursuit of the French fleet, which a short time afterwards met with signal defeat at the battle of Trafalgar. — The unflinching courage and determined spirit exhi-

bited by Nelson on this occasion was the subject of special eulogy in the House of Lords, by His Majesty King William IVth then Duke of Clarence, and is always cited as one of the most daring and dashing of Nelson's many great exploits.

The renowned admiral had the very highest opinion of Sardinia as a naval station, he writes " The world cannot produce a finer, it " possesses harbours fit for arsenals, bays to ride our fleets in, and " so watch both Italy and Toulon. From its position it is worth " a hundred Malas; , and, both in his official and private letters, he strongly and repeatedly urges the acquisition of the Island by the English. In one of his letters he mentions that the net income of the Island did not then exceed £. 5000 per annum, and that it could be purchased for half a million sterling. This was no doubt a high price at the time, considered commercially and financially, but viewed politically or strategically, it would have proved an excellent bargain for England, had Lord Nelsons anticipations, been realised.

The name of Nelson is still remembered and revered in La Maddalena, and previous to his departure, he presented to the Church two massive silver candlesticks and a silver crucifix with the figure of our Saviour in gold; when publicly thanked for the gift, and assured that prayers would be offered up for his victory over the French, he replied " that if they would only pray to the Madonna " that the fleet would come out of Toulon, and it was all he asked " of them, he *would undertake to do the rest*; and they should then " have the value of a French frigate in silver to build a church " with. "

Local scandal is as strong in this small island, as in the rest of the world, and the rumour is still prevalent there, that the noble commander was not insensible to the charms of a young and lovely girl, Emily Isona — at that time the Belle of the Island, — and that it was at her wish and instigation that these ornaments were presented to the church, as offerings for their safety and happiness.

It was from Maddalena that Nelson wrote the characteristic letter to his brother, when the French admiral (La Touche) boasted

that he had driven the whole English fleet before him when in fact, it had simply paraded and then retired with the object of inducing the French fleet to follow. " You will have seen (he writes) from " La Touche's letter how he chased me, and how I ran. I keep it " and if I take him, *by God, he shall eat it.* "

The second historical event is equally interesting. Napoleon, when in garrison at Bonifacio in Corsica, was attached to an expedition which sailed thence to reduce La Maddalena; he acted as second in command, the whole force being under General Colonna Cesarini. A body of troops having effected a landing by night on the adjoining Island of San Stefano, and having erected a battery, a heavy fire was opened in the morning on the town and its defences. They were opposed by a garrison of 500 men, and the fire was returned with equal fury. The opposite shore on the mainland was at the same time lined by mountaineers who, when the French frigate had been dismasted, took to their boats, and attacked San Stefano. The assault was so vigorous that Bonaparte was compelled to make a precipitate retreat with a few of his followers, leaving 200 prisoners with all the artillery and baggage. While Bonaparte was superintending the firing and watching its effects with his telescope, he observed the people going to mass, and exclaimed " I should like to fire at the " church, just to frighten the women. " The shot was fired and the shell entered the church window, and fell at the foot of the image on the altar. It failed to burst, and this miraculous instance of religious respect had its due effect upon the pious islanders, and for a long time the shell was preserved among the sacred curiosities of the town, until it was bought by a scotch gentleman for 150 francs and sent to his native country. A natural cause was however soon discovered for the harmlessness of the projectile, Napoleon continued firing, but finding that the shells took no effect, though they fell on the spot intended, he examined some of them and found they were filled with sand. " Friends, " exclaimed he " here is treason " and the troops who had been suffering severely from La Maddalena concluded that the treason was on the part of the General, and

would have put him to death instantly, had he not succeeded in getting on board his frigate, and escaped. It is said that Pascal Paoli, reluctantly obeying the French convention to undertake this expedition against Sardinia, entrusted the command to General Cesari, his intimate friend, with instructions to secure its failure, considering Sardinia as their natural ally. However this may be, the affair ended by the retreat of the General with all his forces, after having thrown from S. Stefano over 500 shells and 500 round shot into La Maddalena without effect.

Adjoining la Maddalena is the Island of Caprera, formerly the residence of the Italian patriot Garibaldi; it is a mass of barren rock, its central peak being about 800 f^t above the sea, and has several well sheltered Bays, from which the Neapolitan and other fishermen procure immense quantities of crayfish. The Island is said to have been the Head-Quarters of the Saracens when they made their attacks on the Italian coast during the 9th century.

It was from here that Garibaldi made his well-known expeditions on to the mainland, and it was here too where he always returned when his mission was completed; it was here also that he died. Since Garibaldi's death, the Island has been purchased by the nation, and a handsome monument to the memory of the great patriot, is about to be erected by public subscription.

Further south is another historically interesting Island, Tavolara, about the same size as Caprera, and which with its lofty cliffs shelters the Gulf of Aranci and forms a prominent feature in the landscape. When King Charles Albert visited Tavolara he was so struck by the singular freedom enjoyed by the handsome young fisherman, who with his wife and family led a sort of Robinson Crusoe life there, that he "dubbed" him "King of Tavolara". The fisherman has well maintained his right to the title; he has a flag of his own, which he hoists on special occasions, and a small cannon from which he fires salutes and in other respects he keeps up his kingly title and power, by ruling despotically over the fine family which has grown up around him.

CHAPTER III.

Geological formation — Physical aspects — Mountains — Rivers — Lakes — Stagni — Seasons — Winds — Climate — Malaria — Salubrity.

The Geological formation of the Island is varied and interesting. Its whole Eastern half, and also its extreme North Western and South Western points, are essentially of primary formation, being a vast granitic field which is replaced here and there by silurian or crystalline schists. The granite rises in lofty mountains in the North, forming the Limbara range, and all the mountains North of it to Capo Testa, and the Islands of Maddalena, Caprera, S^{to} Stefano and others; going Southwards it forms the Monte Acuto range, the mountains around Nuoro, those at the back of Tortoli, and finally the Sette Fratelli range ending at Capo Carbonara.

Capo Spartivento, the extreme South Western point of the Island, and the Islands of Asinara in the extreme North West are also granitic; whilst the great Gennargentu range which occupies the East centre of the Island, consists of silurian and crystalline schists which form also the mountains rising inland from Spartivento and the Marganai and Monte Mannu mountains in the South West and Capo Argentario in the North West.

At the extreme North East, and from the East centre down to the coast, the granite is overlaid by Dolomite and cretaceous

limestone, forming the bold cliffs of Cape Figari (1200 ft) and the majestic Island of Tavolara which rises almost vertically from the sea to a height of 1760 feet; and again the lofty and picturesque mountains of Oliena, the Monte Albo range running down to Sini-scola, and the mountains of Dorgali reaching from Orosei nearly to Tortoli. The limestone is also found overlying the schist to the South of the Gennargentu where it forms the elevated plateaus of Sarcidano and Sadali (about 1800 feet); also in the extreme South West namely on both shores of the Gulf of Palmas, and in the extreme North West where it forms the cliffs of Alghero and Cape Caccia. On the other hand the North Western quarter of the Island is essentially volcanic, being chiefly basalt and trachite, excepting the environs of Sassari, Osilo, and Ossi, which are pliocenic formations, and the extreme North West, which consists of primary rock, overlaid in some places by limestone.

The South Western quarter of the Island consists of an immense alluvial plain stretching from Oristano to Cagliari, flanked on the North East by hills of pliocenic formation covered in places by slight basaltic and trachitic eruptions, and on the South West by the mountains of granite and schist above referred to, and which also are interrupted in places by trachitic eruptions. The Islands of San Pietro and San Antioco in the South West are almost entirely of trachite.

The basaltic and trachitic eruptions in the North West are considerable in extent, and have produced many remarkable phenomena. From the craters above Ploaghe, basalt and lava streams many miles in length can be traced, and the basaltic plateau of Campeda which is over 2300 feet above the level of the sea has an area of over 50 square miles.

Scattered over the Western side of the Island are several well defined extinct craters upon some of which villages have been built, the most remarkable being that above Keremule.

Within these various formations are found almost every known mineral except gold; and gold is said to have been extracted during

the Roman occupation, though no visible traces of its having been worked are now existing.

Sardinia at first sight, when viewed from the sea, presents a wild, rugged, barren appearance, but upon a nearer approach the aspect changes, and, interspersed with bleak lofty mountains, will be seen beautiful green valleys, rich alluvial plains, and magnificent forests, which astonish and enrapture by their varied charms and grandeur.

The mountains themselves are grand and picturesque, with fine bold outlines, sometimes culminating in fantastic peaks, and at other times forming level plateaus of large extent. Some are clothed with superb trees to their very summits, with intervening patches of rich pasture; and others are bare and rugged, with no verdure save the pale green lichens on the rocks, and a few hardy Alpine plants, with juniper and arbutus trees scattered sparsely amongst them. The mountains traverse the whole Island from North to South, on both its Eastern and Western sides, in continuous ranges, except when broken, by volcanic action, which has created isolated groups of smaller mountains, and formed innumerable valleys, all of which add to the beauty and variety of the scenery.

The most elevated mountains are the "Gennargentu," in the Barbagia range, situated near the centre of the Island; the two highest points of which are 6233 and 6118 feet above the level of the sea. They are covered with snow from September to May, and on their Northern slopes, the snow lies throughout the year. This central group has also the next highest mountain, "Oliena," near Nuoro, (4390 feet). In the North, the "Limbara" group, stands highest in elevation, 4287 feet, while in the South, near Capo Carbonara Monte Genti has an elevation of 3442 feet.

The Rivers of Sardinia are few in number, and small in size; indeed there are only three or four streams, that are worthy to be dignified with the name of River.

The "Tirso" takes its rise in the central group of mountains, and, is the largest; after receiving innumerable tributaries and being

joined by several smaller rivers, during its course of 100 kilometres it falls into the sea on the Western Coast at Oristano. The * Coghinas, rises among the northern mountains, and, after a course of about 80 kilometres, and being united with the * Perfugas, and receiving many smaller tributaries, empties itself into the sea in the gulf of Asinara, near castel Sardo in the north. The * Flumendosa, has its source amongst the high mountains in the Gennargentu range. It is rapid and impetuous in its course, and after being joined by several mountain streams during its run of about 100 kilometres, falls into the Mediterranean on the east coast near the town of Muravera. The * Temo, rises in the centre, near Monte Rasu and after a course of about 70 kilometres empties itself into the sea at Bosa.

There are numerous other small streams, which however cannot be called rivers, many of them are dry during the summer, and others retain a small rivulet, barely sufficient to supply water for the cattle which pasture on their banks.

In addition to these rivers and streams, there are, several large sheets of water, called * Stagni, in various parts of the Island; they are, in fact, small inland seas — the water having a brackish taste, — and stand at an elevation very little above the level of the sea and only a short distance from it. Indeed, the tide — such as it is in the Mediterranean — flows in and out of many of them.

There are also several inland freshwater Lakes, much smaller in size than the stagni, very shallow, and almost grown over with weeds.

The Seasons and their duration in Sardinia vary so greatly in different years that it is difficult to define them. Taking however an average of years, spring may be said to commence in March and end in May, with a temperature of 60° Fahrenheit. The weather is generally fine, with occasional showers and high winds.

Summer begins towards the end of May and lasts till the middle of September with a temperature varying from 80° to 95° Fahrenheit. Rain seldom falls, except in an occasional thunderstorm, and the hot winds which accompany the extreme heat add to the

overpowering stagnation, that seems to hang over everybody, and everything, during the whole period.

Autumn, commencing in September, when the rains begin to fall, prolongs itself into December, and the temperature varies generally from 60° to 75° Fahrenheit. When the rains are over, (they generally last about a month) the weather is fine and fresh.

Winter is, however, the most charming season of the year: it commences in December and lasts till March. There is no snow, except on the high mountains, and the temperature seldom falls below 53° Fahrenheit.

The prevailing winds are the South-East and North-West. The S. E. or "scirocco," blows direct from the eastern coast of Africa, leaving its withering effects along its whole course. It is this wind which raises the temperature to a suffocating heat, and at the same time carries with it a treacherous humidity, which it attracts in traversing the long marshy plains, and which is even more dreaded than its scorching aridity.

The "North-West," blowing from the coasts of Spain and France, is, on the other hand, fresh and invigorating, and is as much welcomed by the inhabitants as the South-East is detested.

The northern wind or Tramontana affects mainly the north of the island. It is said by the very learned author of an elaborate treatise on the climate of Sardinia — written early in this century — that the high range of northern hills prevents this wind having free course into the interior plains, stretching to the South, and to this he attributes the stagnant malaria, so deleterious to animal and vegetable life; but other writers do not concur in this view, nor can its discussion answer any useful purpose, seeing that, if such be the actual cause, it is not removable by any human agency.

There is another wind, or rather, breeze, which is peculiar to Sardinia and requires special notice. It is called "s'imbattu," and blows invariably *from* the sea *on* to the mainland; it spring up about 10 a. m. and often lasts till 1 or 2 p. m. This breeze extends for several miles into the interior, and is the sole relief in

summer to what would otherwise be utter prostration, during those hours of the day, when, without it, the heat would be almost intolerable. It is welcomed by the inhabitants as an old and dear friend, in whom they feel they can place implicit confidence.

"The rainy season," in Sardinia is looked forward to with the greatest interest, as it not only changes, — as it were by magic, — the suffocating heat into delicious coolness, clearing the atmosphere from the oppressing influences of the preceding three months: but it is the harbinger of the magnificent weather, which invariably follows. It restores health and vigour to the dwellers in cities and towns, as well as to the country people; it converts the brown, arid, dried-up plains into green nutritious pastures, and re-fills the streams and fountains with fresh supplies for another season. The rivers in the mountain districts begin first to "fill," early in September, and during the remainder of that month, and in October, they are "in flood," all over the Island. Sometimes it will rain for several days in succession, in an uninterrupted down-pour; at other times it is intermittent, and accompanied by thunder and lightning; raining for a few hours and then ceasing. During this period, in the *campagna*, where the parched lands, after being thoroughly saturated, give out malarious exhalations, travelling is dangerous, and ought not to be attempted except in cases of extreme necessity.

In the cities and towns, in the forests and on the mountains, indeed anywhere in the island, except in the *campagna*, it is as safe and healthy to live during this period, as it is in winter or spring; indeed the statistics of health, at Cagliari, and other places in the island, where official returns are kept, contrast favourably with those countries, which are classed amongst the most healthy in the world.

The climate of Sardinia has however undoubtedly had an evil reputation from early ages. It is the old adage over again "give a dog a bad name and hang him"; and the emphatic denunciations by classic authors, more perhaps in sarcasm, than in seriousness, but not the less effective and enduring on that account, have perpetuated it to

the present time. A few quotations out of many will suffice — Strabo says “ The excellence of the soil is counterbalanced by the misfortune “ that the Island is unhealthy in summer and especially in those parts “ where it is most fertile „ — Silius Italicus, while expatiating on the merits of the country adds “ but wretched in climate and polluted “ by its marshes „ — Martial in eulogizing the *salubrious* (?) Tiber uses the word Sardinia as a “ synonym for death „ — Tacitus in speaking of the expulsion of the Jews from Rome to the Island observes “ and if they should die of the unhealthiness of the climate it “ would only be “ vile damnum „ — Cicero in speaking of, or rather when lampooning Tigellius, the musical Buffoon so well described by Horace, and a native of Sardinia, calls him “ a man more pestilential than his country „ and again in writing to his Brother Quintus, who was for some time Consul in Sardinia he says “ take “ care my Brother of your health, although it is winter — recollect “ that it is Sardinia „ and Dante in his *Inferno* classes Sardinia with Valdichiana and Maremma, the two most unhealthy places in Italy.— On the other hand, modern writers speak much more favourably and hopefully, and Lord Nelson, writing from a practical experience extending over fifteen months, when stationed off the Island, refers in several of his letters — official and private — to the general salubrity of the climate, and specially mentions one occasion when stationed off Pula (which is classed amongst the most unhealthy districts in the South) that, out of four thousand Seamen who were sent on Shore, not a single case of illness was reported, that all were better for the change, at which he expresses much surprise from its proverbially bad reputation. The latest work on this subject is by Professor Saccherò, a medical man who practised for many years in the Island, and the result of his investigations may be shortly stated, as follows; that the malaria which produces intermittent and low fevers in their varied and worst forms, is caused by the stagnant waters, the great difference between nocturnal and diurnal temperature, the heavy dews and fogs, and the rapid decomposition of vegetable matter by the intense heat of the atmosphere; all of which,

he says, " arise from two great sources of evil; want " of cultivation " and want of drainage. "

There can be no doubt that the remedies, suggested by the conclusions of the learned Professor, are essential towards removal of the causes of this evil, but there are other remedies equally essential. The rivers and streams, which in the autumn overflow their banks, flooding the low-lying lands for miles around, and creating stagnant pools and waters, which emit malarious exhalation, should be embanked, and kept within their proper channels; and, this being done, one great source of the evil will have been stopped at its very outset, and drainage, except for agricultural purposes, rendered unnecessary. This drainage however is not unnecessary, as it is a preliminary to extended cultivation, which is another essential; as is also the planting of eucalyptus, and other trees, which attract and absorb the deleterious vapours, and give back in exchange salubrious exhalations which can be perceptibly felt; and this is no experimental or theoretical statement, but absolute reality. Chilivani, a railway station in the North of the Island, was a few years ago a stagnant pool, and the place so unhealthy, that the Railway servants could not reside there, tho' it was an important Junction; the pool was drained, the eucalyptus was largely planted, and has wonderfully thriven, and now there are large workshops and houses for the men, with productive gardens, and it is considered one of the most healthy stations on the line. In other parts of the Island similar operations of draining and planting are being carried on, and it is gratifying to feel assured that the evil, though admittedly great, is greatly exaggerated, and that its gradual diminution, ending to its absolute prevention is within the human grasp and steadily progressing.

Moreover, while, specially dilating on the insalubrity of the Island, and on the *one* disease with which it is traditionally associated, it should not be forgotten that this malarious fever is not peculiar to Sardinia. The Campagna surrounding Rome, the banks of the *Salubrious Tiber*, some parts of Tuscany and Calabria, and of Greece and the Balearic Isles, and almost all other low-lying countries

in the Mediterranean basin, which are partially cultivated and sparsely inhabited, are subject to the same insalubrious influences. In the case of Sardinia too, it should be borne in mind, that earthquakes and volcanic eruptions are unknown and that many diseases and affections, common and fatal in other countries, either do not exist or are very rare. Pulmonary and throat complaints very seldom occur, and cases of gout, epilepsy, apoplexy, idiotcy or deformity, are most exceptional and that hydrophobia and lock-jaw are absolutely unknown; smallpox too has been entirely stamped out, through compulsory vaccination, rigidly enforced; and for 30 years there has been no case of cholera or other epidemic in the Island. This immunity from so many serious and dangerous affections, prevalent in other countries, should be taken as some compensation for the one disease of "intemperie"; and the more so, as by ordinary care and precautions, it can be altogether avoided, is seldom dangerous, and scarcely ever fatal.

"Intemperie" (the name given by the Sardes to this malarious fever) is an irregular combination of the varied forms of ague and fever, and has no distinctive type, but sickness, sudden and alternate heat and chill, with extreme prostration, physical and mental, are amongst the most prominent symptoms. The Sardes however include indigestion, dysentery, congestions, plethora, rheumatic affections, and "the thousand other ills that flesh is heir to," in the comprehensive term "intemperie," and it is not therefore to be wondered at, that it is so much dreaded, and bears so bad a character. The situation too is aggravated by the sensational narration of instances, where the stranger has been struck with the fever, and has died in a few hours, ignoring altogether the fact that there are as many hundreds of instances, where Englishmen and other foreigners, who have resided in the Island from 15 to 20 years, have either never had the fever at all, or had it so mildly, as to create only a slight temporary inconvenience.

The fever is a tedious, but not a painful illness, and though after recovery, the patient cannot be said to have become "accli-

matised, or fever-proof, yet, if again attacked, it is in a milder form, and is much more easily thrown off.

Quinine is the invariable specific, both on the first attack, and in cases of relapse; it is often taken also as a precautionary measure, and is generally efficacious. It is however, *never* taken when the fever is *on* the patient (excepting in very extreme cases), but when the temperature of the blood is at the lowest between one attack and another.

On a resumé, and in justice to Sardinia, it may be fairly said that attacks of this fever are almost invariably the result of a total disregard of those ordinary precautions, which even the Sardinians observe, and which are specially impressed upon every stranger — viz: to avoid excesses of all sorts, to live well but moderately, not to overfatigue oneself, nor travel before sunrise or after sunset, always to wear flannel, and never to get wet through. Observing these precautions, a residence in the low districts, even in the worst months, may be continued with impunity.

Nurhags, and Perdas fittas.



Perdas lungas and Sepulture dei Giganti.



CHAPTER IV.

Antiquarian Remains — Nuraghs — Sepulture dei Giganti —
Perdas fittas — Perdas lungas — Walls — Cells — Temples — Grottoes
— Idols — Tombs — Coins — Vases — Ornaments — Scarabees — Armour
— Ancient Cities — Roads — Milestones — Monuments — Inscriptions
Cathedrals — Churches.

Sardinia abounds in antiquarian remains—dating from the very earliest ages—and they may be conveniently classed in two periods or epochs; the first, extending from the most remote times to the Roman occupation, and the second, from that date to the middle ages.

Both periods contain many highly interesting relics — cities, temples and other ancient buildings, tombs, monuments, idols, pottery, medals, ornaments, coins, weapons etc.

Amongst the most important remains in the first period are the "Nuraghs," the aggregate number of which is stated to be over 3000; they are to be found in all parts of the Island, but mostly in the northern provinces. They are built either on the sides of mountains, or in elevated places on the plains; and their external appearance is that of a truncated cone, varying from 30 to 70 feet in height, and from 100 to 200 feet in circumference, measured at the base. — In nearly all cases the height is equal to the diameter of the base, and the angle of inclination from the base to the apex varies with the height, and it is always well proportioned.

The masonry is of the natural stone of the locality — granite,

limestone, lava, porphyry or basalt — well put together, of various sizes and shapes, some of the stones weighing as much as 12 tons. They are roughly hewn, and no lime or cement has been used. The walls are of great thickness, and many of them are as firm and sound as on the day they were first erected, which, according to the best authorities, must have been over 3500 years ago.

The entrance to the Nurhags is at the base, through an aperture about 5 feet high and 3 feet wide, having a massive lintel over it. This door, which always faces south-east, opens into a passage, 6 feet high and 3 feet wide, from which there is a spiral staircase, constructed of rough stones, and forming part of the solid masonry of the building. This staircase surrounds, and gives access to the interior chambers, of which there are never less than two, nor more than four. The chambers are in the shape of a dome, well proportioned, and diminishing in size as they increase in height. A single massive stone forms the apex; this stone, however, is now found in very few of the towers, and has no doubt been taken away and used for building purposes. The chambers vary from 15 to 20 feet in diameter at the base, and in height from 20 to 30 feet. On the ground-floor are generally three or four cells or chambers, built in the solid masonry, and measuring from four to five feet long and from two to four feet wide.

These domes chambers and passages occupy about one third of the whole structure, and the other two thirds are solid masonry. There is a platform on the top of the building, to which the spiral staircase leads, but there are no windows or other openings, except the entrance at the base and the exit to the platform. The interior is consequently in almost total darkness, and to explore and examine the internal arrangements lamps or candles are essential.

The origin and purpose of these structures are involved in unfathomable mystery, and have baffled the learning and ingenuity of historians and antiquarians for hundreds of generations; a short review of some of the many authorities on the subject, will not be uninteresting.

Aristotle in his work "de mirabilibus auscultationibus" remarks, that in Sardinia there exist great numbers of structures, built in the ancient Greek style, with cupolas (*ὀολοι*) of admirable proportions, and he adds that they were "erected by Iolas, when he occupied the Island," but he gives no explanation as to their use or purpose, excepting that in one passage in his writings he refers to the "heroes" who *slumber* within them, from which it may be inferred that in his opinion they were used as tombs.

Diodorus Siculus attributes their construction to the same founder, and states that they were first called "Dedaleans," from Dædalus, who accompanied Iolas, but he hazards no opinion as to their purpose or object.

Mons. Fara in his history "De rebus Sardis," traces their origin to Norax chief of the Iberians, who, according to Pausanias, came over to Sardinia from Spain; but in arriving at this opinion he appears to rely mainly on the similarity of nomenclature between "Norax," and "Nurags," the Sarde for "Nuraghs." He too, is silent as to their probable uses.

Borelli, a learned captain of Marines, writing about the same period as Fara — and whose works have unfortunately been lost, but are referred to by subsequent writers — discussed the origin and uses of these structures at great length; but he appears to have arrived at no definite conclusion, and admits that he is at a loss to conjecture for what purposes they were used.

Padre Stefanimini in a book, entitled "de veteribus Sardiniae landibus," published in 1773, considers them to have been erected as "trophies after victory," and he adds, that they were used, 1st as houses by the nomadic shepherds or land-owners of those days, who, he thought, resided in those near the sea in winter and in those on the hills during summer; — 2nd as towers of defence and refuge against pirates; — 3rd as tombs, and — 4th as temples.

The abbé Madau, writing in 1792, upon Sarde antiquities, after entering into much detail, comes to the conclusion that they were the work of anti-diluvian giants, and were used as the tombs

of very old and celebrated personages, and he narrates that, in two of the Nurhags, which had been recently explored, human bones had been discovered.

The Abbé Peyron, a member of the Royal Academy of Turin, ridicules the idea of their being used as either fortresses or residences, and considers them to be the tombs of the nomadic Tribes who, were the first inhabitants of the Island.

M. Mimand, a French Consul in Sardinia, in his book, entitled "*Sardaigne ancienne et moderne*," published in 1826, adopts the views of Aristotle and Diodorus Siculus as to their origin, and considers that they were used as tombs.

Baron Mannu, in his history of Sardinia, goes very fully into the question both of origin and of use, and arrives at the conclusion that they were the work of a primitive population of Eastern extraction, and as to their uses, he adopts the views of the Abbé Peyron.

M. Petit Radet, a member of the French Institute, in his papers on the Nurhags of Sardinia, published in 1826, combats the conclusion that they were of Carthaginian construction, and assigns their origin to the Tyrrhenians and Thespians who came to the Island with Iolas; and he considers them to have been designed and intended as funereal monuments.

M. Micali, on the other hand, in his history of ancient Italy, published at Florence in 1832, gives what he considers conclusive proofs that they were built by the Carthaginians and were used as cemeteries or tombs.

As opposed to these two opinions, the Abbé Arri, in his address to the Royal Academy of Turin, in 1834, considers them to have been of Phoenician origin, and to have been used as Temples for the worship of fire; *Nur* being the Phoenician word for Fire; and Mons. Mutrin, in his work on Religious antiquities, attributes to them the same origin and use, and for the same reason; and Padre Angius writing in 1839 takes nearly the same view as to their being places of worship, and adds, that the sun and stars, in the form of fire, as representing a supreme Being, were the objects of adoration.

Such shortly are the different views taken by the most eminent of the various ancient authors who have written on the subject; and the only point on which there seems to be any general concurrence of opinion, is as to the great antiquity of their origin; they do not agree either upon the exact period of their construction, or the people by whom, or the purposes for which, they were erected.

General La Marmora in his elaborate work upon Sardinia comments upon the various views of these authors, and, as regards the uses of the Nurhags, contends that as " trophies, " their number is too great, and that this hypothesis is inadmissible on that ground alone; that as " fortresses, " the situation of a very large number of them, as well as their mode of construction, either for purposes of offence or defence, are opposed; and that the same objection applies with equal force to their being intended or used as " watch-towers " (indeed their situation alone would condemn any such assumption); and altogether he appears rather to arrive at the conclusion — though with many doubts and much hesitation — that they had the twofold uses of tombs and places of worship, basing his views upon the fact of the discovery of human bones, idols, and religious ornaments found in several of those which had been explored. It should be mentioned, that since 1840, when La Marmora wrote, further discoveries of bones, idols and ornaments have been made, which seem rather to favour the conclusions he had then arrived at.

Amidst such diversity of views among so many learned authorities, it seems presumptuous for an outsider, with no pretensions to antiquarian knowledge or research, to hazard an opinion, but " fools " rush in where angels fear to tread, " and I would venture to observe, as regards their origin, that in-as-much-as there are no similar buildings in any of the countries from which the earliest colonists (known or reputed) are supposed to have come, nor in any of the countries to which other colonists from the same places previously or subsequently migrated, and further, that, as no archaeological remains of the same style or form — either Etruscan, Pelasgic, Cyclopean, Phoenician or Egyptian — are known to exist in

any other part of the world, the most consistent and reasonable conclusion to arrive at is, that these unique structures were the work of the aboriginal inhabitants of the Island, and that to them, and them alone, are due the merit and honour of their creation.

As regards the objects or purposes for which they were designed or used, there is ample scope for legitimate discord of opinion but the most rational conclusion appears to be, that they were the habitations of the chiefs of the various tribes that originally inhabited the Island, and that, as such, they would serve also as watch-towers, or castles of defence and protection in cases of hostile attack or invasion; nor is this conclusion inconsistent with the fact that human bones have been discovered in the lowest chambers of several of these structures, and that idols and ornaments have been found in some of the upper chambers; indeed they may have answered to a certain extent the three-fold purpose of habitations, defence, and places of worship, and this would accord to a great extent with the popular opinion, held by the Sardinians themselves, founded upon traditions handed down from time immemorial, but altogether ignored by the various learned historians and archaeologist who have left us their views on the subject. Further explorations would no doubt throw some further light upon the mystery, and there could not be a more interesting subject for antiquarian research, or one more likely to repay by its results the trouble and expenditure incurred, than the elucidation of the doubts in which these most numerous relics of the earliest ages are involved.

The nearest approach in resemblance to these structures in other countries are the "Talyots", in the Balearic Isles, but these are essentially different in many important characteristics. It has been said, too, that they bear some affinity to the "round towers", in Ireland and the "cromlechs", in Scotland, but the most learned antiquarians declare there is nothing "cognate", or in common between any of these structures and the Nuraghs.

The ancient remains next in importance, and, like the Nuraghs, peculiar to Sardinia, are the "Sepulture dei Giganti", or the

* Tombs of the Giants „. These relics are not so frequently found as the Nuraghs, but they exist in considerable numbers, and in most parts of the island, but more generally in the northern province. Their origin is involved in the same mystery as that of the Nuraghs, but there can be little doubt as to their object or uses.

* The Sepulture „ consist of a series of large stones arranged alongside each other, and enclosing an excavated piece of ground, varying from 15 to 30 feet in length, from 4 to 6 feet in width, and about the same in depth; the opening being covered by large flat stones resting on each side for the whole length.

The direction of the Tomb invariably points from S. E. to N. W., and at the S. E. end is a large, upright headstone from 15 to 20 feet high, elliptical or conical in form, and having a large hole or opening near the bottom, about 20 inches square, the use of which has also been the subject of much learned discussion, but is still involved in doubt. On each side of this headstone, eastward and westward, is another series of stones, undressed and unequal in size, arranged in the shape of an arc, the chord of which would measure about 20 feet. The whole figure resembles in form the bow and chord of an ordinary English riding-spur.

The universal belief of the country, founded upon the same traditions as the origin and uses of the Nuraghs, is that these * sepulture „ are the actual tombs of veritable giants; and the foundation for this belief forms the subject of several most interesting and learned dissertations.

When the Canaanites immigrated into Sardinia, they would, it is supposed, naturally bring with them their idolatrous forms of worship, amongst which the worship of giants was one of the most common; and it is not impossible that some of the tribes of the * Anakims „, or other gigantic races, actually accompanied them in their colonization.

Father Bresciani, a learned Jesuit, in his valuable work on Sardinian antiquities, goes so far as to trace the route through Egypt, and along the coast of Africa, by which this immigration

took place, and he disconnects it from the expulsion of the Canaanites by the Israelites under Joshua, demonstrating it to have occurred one or two centuries before that event, when the giant tribes east of Jordan were subdued by the Moabites and Amorites. In proof of this hypothesis he quotes Moses, who narrates that "the Enims dwelt therein (i. e. Moab) in times past; a people great, and many, and tall, as the Anakims; which also were accounted giants, as the Anakims; but the Moabites call them Enims."

This immigration however rests upon very slender evidence; and it may be questioned whether these "sepulture," as well as Nuraghs, do not belong to an age anterior to the Phœnician or Canaanitish colonists, and were the work of the aboriginal inhabitants of the island. The point is raised by Mr Tyndale in his interesting book upon Sardinia, who makes the very apposite remarks: "We may reduce the enquiry to the simple question: — were they built by the "auctoethones," of the island, of whom we have no knowledge, or by the earliest colonists, of whom we have little information?" Simple as the question appears, it is not very easy to answer; but on a review of the various arguments and conjectures, the balance of assumption seems to be in favour of these "sepulture," being the work of an aboriginal population, and mainly from the fact that like the Nuraghs, no such monuments exist either in the country from which the earliest colonists came, or in any other part of the known world.

From the fact that many of these sepulture are found near to Nurhags, some writers have come to the conclusion that the two structures had some sort of affinity with each other, and that the sepulture were the tombs of the residents of the adjoining Nurhags; but against this theory it may be observed, that the far greater number of the Nurhags have no such cemeteries attached to them, and that the entrances to them are inconveniently small even for a person of ordinary size, and that it would have been difficult, if not impossible, for a giant of traditional or scriptural stature to have "squeezed through." Goliath (David's dreaded antagonist) may be

taken as a fair specimen of the class, and he, we are told, measured " six cubits and a span " (about 9 feet, 9 inches) and as he would no doubt be proportionately broad, no door-way of any Nurhag would have admitted him, still less would it have admitted a Giant of the size of Og, if we may judge from the dimensions of his bed; or a Giant large enough for the " sepulture " which were on the average about 36 feet long and 6 feet broad.

It should be borne in mind however in arriving at any decision, that the word " giant " does not necessarily mean, as popularly supposed, a person of immense stature and enormous strength. " Giant " is derived from two Greek words " γῆ " and " γένος " which signify " earth-born " or indigenous; and the mythical account of the origin of giants coincides with this etymology. They are represented as the sons of Coelus and Terra, Heaven and Earth; and Josephus considers them to be the offspring of the union, mysteriously described by the sacred writers, of " the sons of God with the daughters of men. "

Moreover, Sardinia may have had a race of " giants " of its own. The neighbouring island of Sicily had its Cyclopean race, and the description, given by Homer and Virgil, of Polyphemus and his fellow-shepherds, as first seen by Ulysses, conveys a vivid picture, not only of their size and stature, but of the pastoral life led by these men in those days. Robbers cut-throats and barbarians they no doubt were, yet they were greatly in advance of that state of social life, when men " roamed the woods, lived in rocks, and fed on acorns " and such, we may not un-fairly assume, was the advanced condition of Sardinia at this period, and that to a great extent would account for their ability to construct such buildings as the Nuraghs, and such monuments as the " sepulture. "

Still it may be objected, that the ancient legends relating to giants are too fabulous for any sound theory to be grafted upon them, but to reject the theory altogether, on the ground of general disbelief in the existence of a race of persons of extraordinary strength and stature, is to regard the sacred narratives of Scripture as equally fabulous with the fictions of the poets; and this very few amongst

us would be prepared to do. Whether, however, there were giants in the island — indigenous or imported — there can be no doubt that these monuments, by whomsoever they were built, were intended as memorials of distinguished men to be handed down to posterity; and when we find the Sardes, tenacious of their traditions above all other people, pointing to these structures as monuments of the founders of their race, may we not accept their belief without any great stretch of credulity?

There are two other mysterious monuments or relics of antiquity, the origin and purpose of which are involved in obscurity, and which, though not found in such numbers as either the Nuraghe or sepulture, are yet worthy of mention; viz “ *Perdas fittas* ,” and “ *Perdas lungas* .” The former consists of a row of six conical stones, standing in a straight line a few paces apart from each other. They are about four feet six inches high, and of two kinds; and are supposed to be typical or representative of the male and female form, from the fact, that three of them have two globular projections from the surface, resembling the breasts of a woman; on the other three, however, there is nothing indicative of the male sex.

Speculations, as to what was their origin, or what they were intended for, are most vague; but the generally received opinion, amongst ancient and modern writers, appears to be, that they are of Phœnician creation. Whether, however, they represent the tombs of six illustrious men and women; or whether they are idols representing the personification of love — the generative and fecundative principles — and as such the object of adoration, is a subject on which learned authorities differ widely.

The “ *Perdas Longas* ,” consist of three monoliths, differing from each other in size, but all having a conical form. One of the most perfect in the Island is near Nuoro, the centre stone of which is 18 ft. 6 in high, 3 ft. 2 in. wide in the middle and 10 in. at the top; the two outer stones are six feet apart from the centre one, and are 7 ft. 3 in. high, and 2 ft. 4 in. wide.

Monoliths in other parts of Europe are generally considered to

be Celtic remains, but these according to the best authorities, are of Phoenician origin, and were objects of worship.

In several of the central and northern districts are found the remains of ancient walls, built of large un-hewn stones — in the shape of parallelograms — some laid horizontally, others placed upright, but without lime or cement, and apparently of Cyclopean or Asiatic construction. These walls are generally found, either surrounding mounds, natural or artificial, or enclosing a level space within which are the ruins of old citadels or temples, most of which bear evidence of having been only one storey in height.

On some of these mounds are the remains of Nurhags, which would indicate, that the walls had been built either anterior to, or contemporaneously with, those structures.

In other districts are to be found cells or grottoes, hewn out of the solid rocks, many of them having several chambers or compartments, which vary in size; some of them measuring 8 ft. long, 7 ft. broad, and 5 ft. high, and communicating with each other, and also having direct openings to the outer world. These openings are about $2\frac{1}{2}$ feet square, and are generally about 6 or 7 feet above the surface of the adjoining land, so that to gain access some sort of ladders or steps must have been necessary. Near Bitti, a town in the East-central part of the Island, there may be seen one of these cells which is hewn out of an isolated block of granite, about seven feet cube. It is said that similar grottoes are to be found in the valley of Ispacia in Sicily, and in several parts of Africa.

There are remains of other structural antiquities scattered throughout the Island, evidently of a very ancient date, but they are not sufficiently distinguishable, to admit of any intelligible description, or for hazarding any opinion about them; there can however be little doubt, but that the exploration of some of them would disclose many interesting relics, which would amply repay the antiquarian who undertook the labour.

In addition to these monumental remains, there have been found many other relics of these early ages, in the shape of idols, images,

medals, coins, vases, ornaments, arms, and articles of terra-cotta and glass, the mention which should not be omitted.

The "Sarde Idols," as they are called, of which there are nearly 200 specimens in the museums, at Cagliari, Turin, Florence, Paris, and Lyons, are small bronze figures varying from four to seventeen inches in height, irregular and grotesque in form, and of rude workmanship. These Idols are no doubt symbols of the religion of the earliest inhabitants, and some are unquestionably derived from the Canaanites and Phoenicians. Amongst them are found hideous images, miniatures of the original statues of Moloch and Baal, which were the objects of "abomination," of the Canaanites and Phoenicians and the "horrors of the valleys of Hinnom and Tophet." Some of them hold in the right hand a sword, and in the left a grid-iron, and having ferocious eyes; others with their arms down, as if in the act of letting an infant drop into the fire; others appear to be carrying cakes in their hands, probably offerings to Astaroth, alluded to by Jeremiah, "the children gather wood, the fathers kindle the fire, and the women knead dough, to make cakes to the Queen of Heaven, that they may provoke me to anger."

The symbols and emblems of divinity comprise dogs, bats, apes, birds, flying dragons, and other indescribable monsters, objects of Phoenician and Egyptian worship; amongst them too are figures of warriors, with helmets having horns attached to them, which are supposed to be the "Astaroth Carnon," of Genesis, for "Carnon," means horns. Some of them have dresses similar to those worn by the Sardes in the present day, very short full trowsers reaching half way down the thigh, the vest with rows of buttons, and the "mastrucca," and phrygian caps also clearly designated; others are images representing serpents, human heads and stars, shewing that astrology and divination formed part of their creed; and these in many respects correspond with the images, household gods, and talismans, of ancient eastern nations, denominated in the scriptures under the name of "Teraphin." Some of these idols have the face, figure, and other characteristics, of the female sex, but have also either beards, helmets,



Carde Idols.

.....

.....

or dresses, denoting the male sex; and others have the forked caudal appendage of a serpent or a fish, which would seem rather to favour the actual reality of the Darwinian theory; in the right hand is a forked stick, supported on the shoulders, and in the left, is an article spherical in form, with certain letters or words engraved on it, which are either in an unknown tongue, or impossible to decipher; and on the shoulders and knees are circular pads or bands of mythical and mysterious meaning.

Sarcophagi have also been found in some districts, principally in the Nurhags, and they are generally of marble. One of them, found near San Gavino, has representations of the Muses sculptured on one side, with figures of Apollo and Minerva on the other.

In the Cagliari museum are several medallions and mosaics, that were found in the subterranean chambers of Nurhags, and are evidently prior to the Roman period, and on one of these is engraved the figure of Orpheus playing on his Lyre.

In the first period too, must be classed some of the Ancient cities and towns, anterior in date to the Roman conquest, through they were also flourishing towns during the time of the Roman occupation.

The two most ancient, of which there is any historical record, are Sulcis and Tharros.

The former was situate in the small Isle of Sant'Antioco, facing the gulf of Palmas, and is supposed, from the monuments, ruins of temples, inscriptions, and other relics, to have been of Phoenician origin. The city appears to have been circular in form, and surrounded by a wall, about six kilometres in circumference, of which many disjointed portions still exist. It is said to have been a flourishing town in the time of the Carthaginians, as also during the Roman period; but, after the latter epoch, it was repeatedly attacked by Vandals and Saracens, and was eventually reduced to ruins in the middle of the 11th Century.

The present town of San Antioco, near the site of the ancient city, was built from the debris of the ruins.

Tharros was situate on the Isthmus, north of Oristano, and

from its antiquarian remains, it has evidently been of Phoenician origin and was successively inhabited by Egyptians and Romans; it was, like Sulcis, subjected to continuous attacks from Vandals and Saracens, and so much was the city harassed, owing to its exposed situation, that it was deserted A. D. 1050, and was moved bodily to Oristano.

Many explorations of the ruins of both these cities have been made, and in the temples, tombs, and houses, have been found a considerable number of vases, coins, lamps, urns, scarabees, bracelets, rings, and other articles of jewelry in bronze and silver, vases and cooking utensils, most of which are of silver, and anterior in date to the Roman conquest.

The antiquities of the second period, commencing with the Roman occupation, comprise cities, castles, temples, amphitheatres, baths, roads, monuments, sepulchres, inscriptions, coins, medals, medallions, mosaics, vases, statues, articles of pottery and glass, figures and ornaments in gold, silver, and bronze, pieces of armour, cooking utensils, plates and various other relics.

Cagliari the capital of the Island, though dating back in its origin to the early ages, yet possesses few antiquarian remains (except the necropoles at the South East and North West of the City which are said to be Phoenician) anterior to the Roman occupation, but it is rich in relics of that, and the subsequent, period.

During the Roman occupation, Cagliari was the principal port in the island, and the vivid picture of it, given by the Poet Claudian, is as applicable to day as it was nearly 2000 years ago.

*Tenditur in longum Carali tenuemque per undas
Obvia dimittit fracturum flamina collem.
Efficitur Portus medium mare, tutaque ventis.
Omnibus ingenti mansuescunt stagna recessu.*

Cagliari, in the Pisan period, was almost entirely rebuilt, and its Cathedral, castello, Archbishop's and viceroy's palaces, and most of the churches and public edifices, were erected during that period.



Vases Coins Inscriptions and ancient Relics.

There were then six gates or entrances to the City from the land side, and one of them was flanked by an enormous square citadel, called the "Elephant Tower," which is of most solid construction, and is now standing in perfect preservation.

Of ancient Roman buildings one of the most interesting is the "Grotta della Vipera"; it has four columns in front, supporting an architrave, on which are two serpents, placed between four altars, and from these the Grotto takes its name. In the vestibule, under the portico, are numerous Latin and Greek inscriptions.

The history of the sepulchre is buried in doubt, but it is generally supposed to be the tomb of the wife of one of the Roman Prætors of Sardinia, who had previously been Prefect in Syria, and had there been initiated into the mysteries of Isis, and hence the serpents on the portico.

There are many other ancient sepulchres, excavated in the slope of the same hill, where the grotto is situate; some of which are now used as habitations by the poorer people, but none of them merit special mention.

In the ravine below the Castello, are the remains of an Amphitheatre, which has been almost entirely formed out of the natural Rock, and it is calculated to have had sufficient seats to hold 20,000 spectators. In it are subterranean aqueducts, and chambers no doubt once used as dens for wild beasts; and there are several passages, and corridors, and other arrangements, very similar to those in the amphitheatres at Rome, and other Italian cities.

In several places in the Island are to be found the remains of temples, which, from the fragments of columns, cornices, and capitals, were evidently of Roman architecture; some of them too are paved with rough mosaics, and one has, over its altar, pieces of disjointed cornices, with an inscription by Marcus Aurelius, but it is impossible to decipher it. Near Porto Torres are the relics of a temple, nearly all buried, but, from the scattered pieces, and fragments of inscriptions, they are supposed to be the ruins of a Temple of Fortune.

The Public roads in the Island, made by the Romans, must have

been extensive, they are broad and seem to have been paved; Baron Manno in his History estimates their aggregate length at 255 miles.

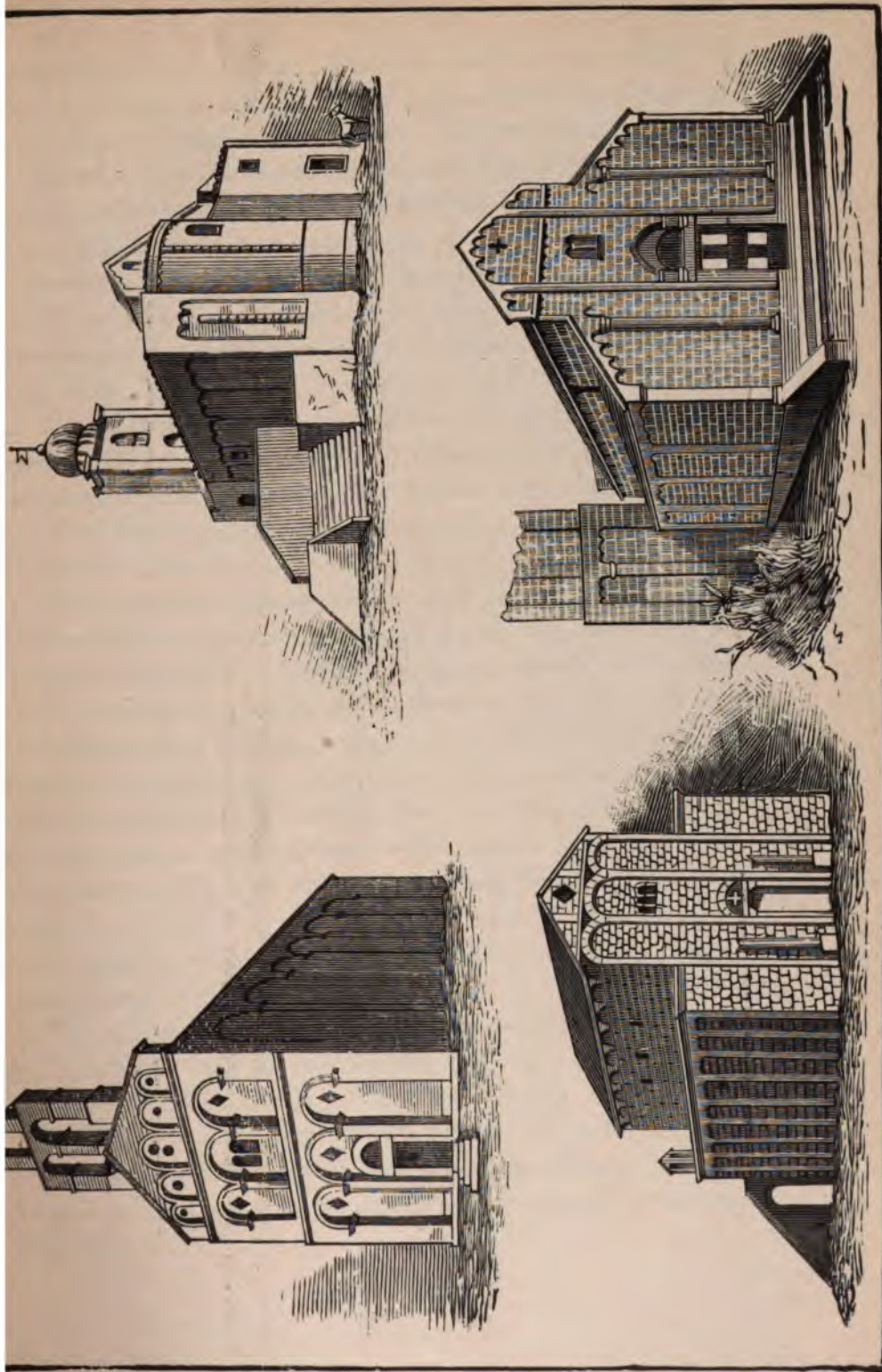
Opinions differ as to the exact routes traversed by these various roads; for many of the ancient routes, referred to in the Itineraries of Ptolemy and Antonine, not only do not now exist, but very indistinct traces of them only remain and their direction is unknown.

There are however distinct and positive remains of a main road, leading from Cagliari in the South to Porto Torres in the North, and on this road are two milestones, one on each side of the entrance to the town of Macomer, which, from the inscriptions, had evidently been originally erected in the times of Vespasian and Severus: They denote the respective distances from both towns, and it is worthy of mention, that these figures vary less than a kilometre in difference between the relative distances by the old Roman road, and the present road now connecting the two towns. A third milestone was found in the same neighbourhood some years ago, but there is no engraving on it to shew its date, as however it denotes one mile further from Porto Torres than the other, it must have been originally placed at that distance South of Macomer.

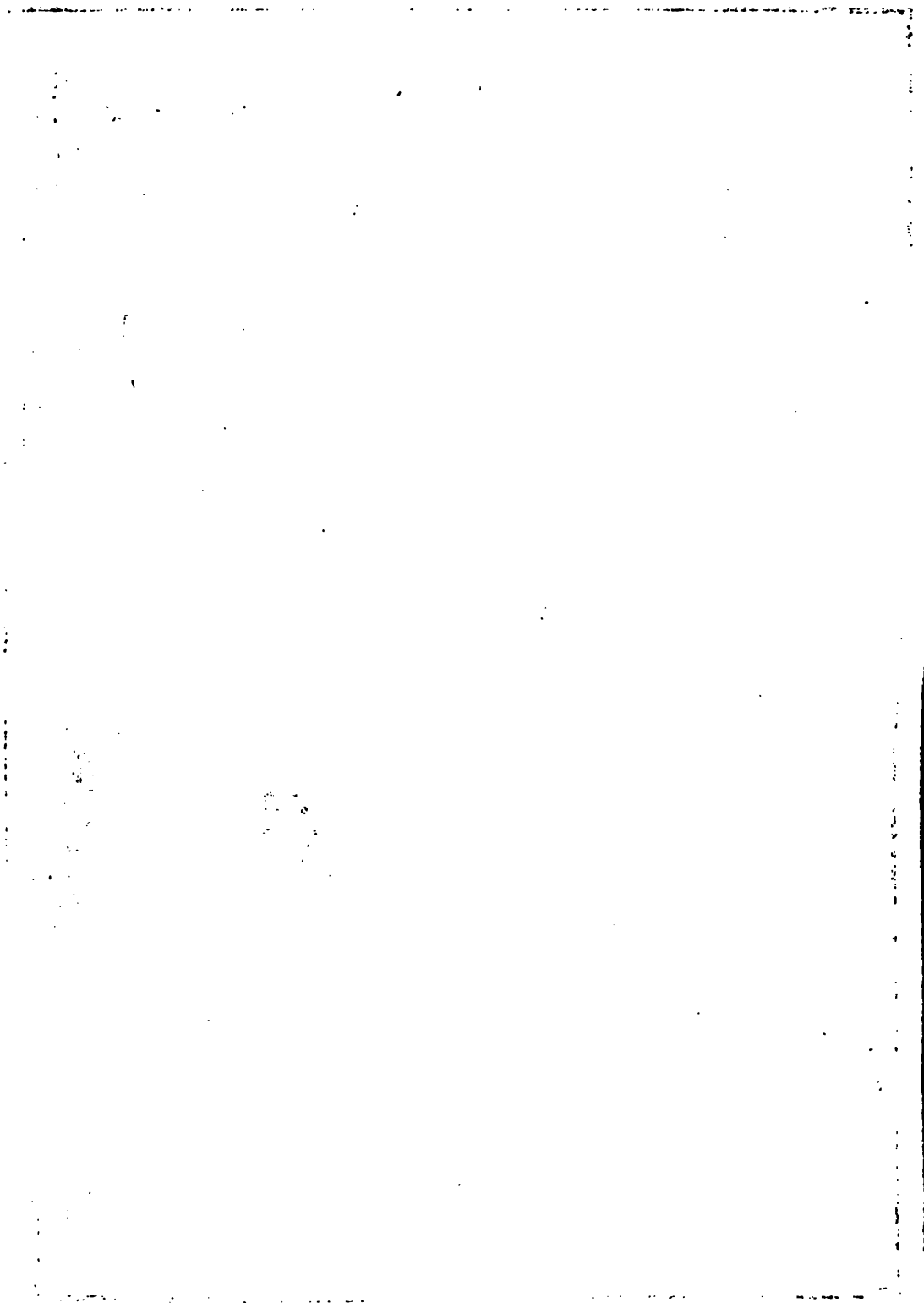
Two other of these interesting relics (which are blocks of granite about two feet high, and one foot broad, firmly fixed in the ground) were discovered, when making the new roads in the Island, about 50 years ago; one bears the date of Nero's reign, and denotes a distance of 16 miles from Porto Torres, and the other bears the Inscription "*via quæ ducit a Tharros.*"

Numerous sarcophagi, tombs, and coffins, have been found in many other parts of the Island. These monuments are generally of marble; one discovered near Porto Torres has the carved representation of the muses, and other classical figures easily distinguishable by their special attributes, and very similar to, though later in date than, that found at S. Gavino.

In these ancient monuments, as also in the Nurhags, Sepulture, and other structural remains, there have been discovered, from time to time many medallions, and coins in bronze and copper,



Sarde Churches in Pisan the Middle Ages.



issued by successive Roman Emperors, the most interesting of which is a coin with the image and superscription of "Sardus", from whom the island derives its name, and others have on them the figures of Gods and Goddesses; the ornaments in gold and silver comprise necklaces, rings, amulets, and bracelets, urns for ashes, scarabees set in gold and silver, lamps in bronze, vases of terra cotta, articles of glass, earthenware and pottery; and fragments of columns, pieces of armour, and models of chariots (one of which is decorated with the figures of cupid and some other winged genii) have also been found in great variety and profusion.

Many monuments of stone, most of them erected by the Emperors Aurelius, Vespasian, and Severus, with Inscriptions to the memory of Sardinians who had distinguished themselves in the Senate, or in arms, have been found in various parts of the Island, and are now in the museum at Cagliari.

The Cathedrals, and most of the Churches in the Island, were built betwens the 11th and 14th Centuries, and with the exception of the two Cathedrals of Cagliari and Sassari, (which are specially referred to afterwards in the descriptions of these cities) all the other Ecclesiastical Buildings, whether in the large towns or small villages, are devoid of all architectural pretensions, though internally some attempts have been made at decorations; excepting, however, the altar, which is nearly always of white marble, and often massive and handsome, the general effect is more tawdry than imposing. The paintings in general are mere daubs, and some of the Images are more suggestive of figures at a wax-work show, than the Representations of Saints and Martyrs.

Nora, in the south of the Island was, according to Pausanias, the most ancient city in Sardinia, but it is now entirely in ruins. It has been very imperfectly explored, and the only vestiges of antiquity made visible are of the Roman period. There are traces of an ancient port, with quays on each side of the Isthmus, and the remains of an aqueduct, a theatre, and other evidences of Roman civilization.

At Bosa, originally called "Castra", on the West coast, are several Roman remains; and at Fordonangianus (situate almost in the centre of the Island, and anciently called Forum Trajani) are found the remains of an aqueduct, and a portion of one of the old Roman roads, with the ruins of a fine bridge over the Tirso.

Near San Giacomo, and at other mineral springs, are the remains of Baths, evidently of Roman construction, but so ruinous and disjointed as to be almost undistinguishable, and altogether indescribable.

The Island abounds in old Castles, most of which have traditional histories attached, many of them of thrilling and dramatic interest. All are in ruins but several of them have distinguishing characteristics, which can be more or less distinctly traced.

One of the most ancient of these castles is at Laconi, near the centre of the Island. It was built in the 8th or 9th century, and was formerly one of the seats of the Giudici of Arborea; it afterwards came into the possession of Arragon, and was given by Ferdinand to his uncle, who sold it to the "Signores" of Castelvì, from whom it passed by heritage to Count Santerre, and, through his descendants, by various successions, it came to the present proprietor, the Marquis of Laconi. This Castle is in a perfect state of ruinous preservation. The court-yard, banqueting-hall, and several bed-rooms with the staircase being clearly distinguishable. The kitchen too, is well defined, as is also the dungeon, without which no ancient or medioeval castle can be considered "correct." Surrounding the old castle, are extensive plantations, pleasure grounds, and gardens, within which stands the handsome, but comparatively modern mansion, where the present noble proprietor, with his numerous family, resides during the greater part of every year, fully occupied in looking after his farm, forests, and estates, (which are the largest in the island) and in hunting, and shooting — sports to which he is passionately attached, but not indulged in to the neglect of his magisterial, municipal, and other public, functions, — indeed, he may be said to be "the model" of a Sardinian nobleman.

Running through the grounds, and passing near the mansion, is

a stream of delicious coolness, which has the property (where it forms a waterfall) of petrifying the leaves, sticks, and other substances, which fall into it; and yet, at a short distance lower down, it flows into some large stone basins, which are used, as public wash-houses, by the populous town of Laconi, and the water is not considered too hard, or unsuitable for that purpose.

The Castello del Goceano was built in the 12th Century, and it was here that the unfortunate Giudicessa Adasia was imprisoned by her husband, and on the abolition of the "Giudici", it fell into the hands of the Arragonese. It was often besieged by the Pisans, but was never taken, though much injured. It was restored in the 14th Century and is now the property of the crown; Count of Goceano is one of the ancient titles of the Kings of Sardinia.

Castel Doria, near Tempio, must have been once one of the most impregnable strongholds in the Island. The date of the foundation of the Castle is unknown, but A. D. 1354, Pedro of Arragon gave orders for it to be repaired, as a counter-irritant against the attacks of the Genoese, who at that time held Castel Sardo. Matteo Doria was then in possession of it, and on his death, it was conferred on Brandelasse Doria, by whose successors it was held till the 15th Century, when it was taken and retaken by various factions, and eventually fell into ruins, while in the hands of the kings of Spain.

The outer walls of this venerable and romantic ruin were the natural rock. The interior was divided into several stories, and the lowest, which still stands, is 95 feet high, and is a fine specimen of the grand masonry of that period. The dungeon beneath is almost perfect, and there is a large subteranean reservoir, supplied with water by pipes, or, as they would be more correctly described, by cemented passages. The view from the Battlements over the adjoining country is magnificent, and when its possessors were also owners of all the villages and lands within sight, it must have been a splendid possession, even for such a proud and powerful family as the Dorias then were.

Castel Sardo is one of the most ancient Citadels in the Island, and has a most chequered history. It was built by the Doria family A. D. 1100. It was then called Castel Genovese, but in the 14th century, family dissensions arose, and it became the scene of hostile attacks, in which the Malespina family also joined, and after undergoing a long and severe siege, the castle was taken by Alfonso the Xth, who changed its name into castle Arragonese. During the next Century it was unsuccessfully attacked by the French, and from that period it has shared the general fortunes of the rest of the Island.

At Iglesias are the ruins of an old Castle, which played a not unimportant part in the political history of the Island. It was built by the Pisans about A. D. 1322, and in the year following it was besieged by the Infante Don Alfonso, the son of Diego II, King of Arragon, who arrived at Porto Scuso with five hundred vessels, and a large military force. The town and castle were garrisoned by two hundred Cavalry and one thousand Infantry, and held out for six months against the greatly superior Arragon forces, and it was not till the castle had to surrender by reason of actual starvation, that they succeeded in capturing the town. It is said that twelve hundred Arragonese died during the siege, from sickness or other contingencies of war.

Near the village of Cuglieri is the old castle of Serramala, situated on the summit of the hill, which commands a grand view of the surrounding country, and of the Mediterranean. It has still two towers standing, with a double outer wall, but the interior is in a state of utter neglect and desolation. After passing through all the vicissitudes of the Genoese possession, and of various transfers in the times of the Giudici of Arborea, and the Arragon Kings, it was annexed in 1585 by Philip II of Spain, from which period it has remained a royal appanage.

Macomer, the "Macopsia" of Ptolemy, must have been a town of some importance in the Roman period, though, with the exception of its milestones, very few antiquarian relics now remain; but it is on record that several important battles were fought in the neighbourhood,

and it was in ancient times the residence of the Marquis of Oristano, (who held a prominent place in Sarde History) and of the Spanish viceroys.

Within the radius of a few miles of Macomer are to be found the greatest number of Nurhags that exist in any part of the Island, and some of them are almost perfect; there are also several sepulture di Giganti in the neighbourhood.

There are many other interesting old Towns and Castles, on the coast, and inland which existed in the times of the Romans, and subsequently either fell into decay or were destroyed by the Goths and Vandals; some of them were reinstated during the Pisan period, and then again became almost ruins, and most of them still remain in that state; all have histories attached to them, but to describe them in detail, or even to refer to them shortly in categorical fashion, would occupy too much space; many however are well worthy of inspection, and a highly interesting volume might be written about them; indeed they would afford an inexhaustible supply of materials for the historical and sensational novelist.

CHAPTER V.

Population — Language — Classes — Nobles — Ecclesiastics —
Lawyers — Doctors — National, Provincial, and Communal Represen-
tation — Laws and their Administration — Feudalism — Land transfer
— Taxation — Imports and Exports.

The population of the Island has fluctuated greatly; previous to the Roman occupation it is stated to have exceeded two millions; but in A. D. 1775, which is the earliest official return, the population was assessed at 436,374; and in A. D. 1815, it had further decreased to 352,867; 25 years afterwards however this decrease had been more than made up, the numbers being then 524,000, and on the Census, 14 years ago, the increase had been at a still greater ratio, and the population then numbered 636,660.

The great decrease from the early period to A. D. 1775, and again to A. D. 1815, is no doubt attributable to the periodical sieges, and conflicts with foreign foes, and the almost continuous internecine conflicts amongst the inhabitants themselves, as well as to the fearful visitations of plague, which at various times have decimated the population. It is on record, that after one battle, as many as 15,000 prisoners were taken, and sold as slaves; indeed the frequency of these sales at Rome gave rise to the expression "Sardi venales," (Sardes for sale, or cheap as Sardes;) and the plague of 1398 alone, it is said, carried off nearly one half of the entire population; the

comparatively slow rate of increase in later years, when there have been neither internal struggles nor foreign conflicts, is due to the loss of life during the famine of 1815, and through vendetta, and brigandage, which, until recent times, were rife in the Island. These causes have however, now ceased to exist, and the ratio of increase will, it is stated, be found to be much larger, when the next census is taken; indeed it is confidently asserted that the population at the present time exceeds 700,000.

The proportion of acreage to population, as compared with the remainder of Italy, and with France, Belgium, and England, is interesting: Sardinia gives about ten acres to each inhabitant; this is four times as much as the rest of Italy — which is about the same as France — six times more than in England, and eight times as many acres per head as in Belgium.

Much has been said, and more written, about the prevalence of crime and the insecurity to life and property in Sardinia; but an examination of the criminal statistics shews that in both respects it is superior to many Continental States.

In Sardinia, the convictions are 1 in every 282 of the population; in the rest of Italy the proportion is 1 in 264; and in France it is 1 in 218.

The Sarde language is a curious compound of Latin, Spanish, and Italian, with a slight mixture of Phoenician, and other ancient words and phrases. Indeed it may be said to partake, to some extent, of the peculiarities of the languages of all the various colonists and conquerors who have successively occupied the Island; it assimilates, however, more to antient Latin, than to any other language, or to any of the dialects of modern Italy.

It is not very difficult to understand, excepting as spoken at Sassari, where the guttural pronunciation renders it almost unintelligible, even to those who have acquired some proficiency in the language in the other districts of Sardinia.

In one of the northern villages, where I was staying for a few days, the language spoken was almost pure Latin; but, as the

pronunciation was totally different from what I had been taught in early youth, it was not easy to comprehend until reduced to writing, and then the old familiar school-day characters stood out, as in days long gone-by; and though I had seen but little of them of late, I was able to carry on a conversation in writing with comparative facility. This however, was not unaccompanied with some difficulty, as the only persons in the village, who could read or write, were the mayor and myself, and my communications therefore were necessarily somewhat restricted, and limited to cases of extreme need, and when the processes of shouting and gesticulation — usually resorted to by Englishmen to convey their meaning to foreigners — failed to have its effect.

At Alghero, on the West coast, pure Catalan is spoken, and the Genoese dialect prevails at Carloforte. Slight differences of pronunciation, or of accent, or even of words, render it easy for the practised ear to distinguish by the language, as readily as by the costume, what part of the Island a Sarde comes from.

The Italian language however will no doubt very soon take the place of all other languages in Sardinia. It is taught in all Schools, and is universally spoken and written by the higher classes, and in the large towns; and all official papers are now issued in that language. Moreover, as the young recruits from Sardinia are invariably sent to the mainland for at least a year, and reading and writing form an essential part of their training, this alone will go far towards generalising the Italian language in the Island.

There exists a very good grammar of the Sarde language, written by the late Canonico Spano, who has also compiled a Sarde and Italian Dictionary, in which, he gives the real Sarde equivalent of each Italian word, as also its modifications (if any) most generally in use in the northern and southern districts.

The rendering of the Lord's prayer in Sarde or Logudoro language, (so called to distinguish the Sarde proper from its northern and southern dialects) will give the best idea of the composite character of the language, and to those at all familiar with the old

and modern languages to which it assimilates, it will convey a more accurate appreciation of its composition than any description.

“ Babbu nostru qui stas in sos chelos, sanctificadu siat su no-
“ men tou. Benzat a nois su regnu tou. Facta siat sa voluntade tua
“ comente in su chelu, asì in sa terra. Su pane nostru de ogni die do-
“ nanoslu hoê, et perdonanos sos peccados nostros comente nos ateros
“ perdonamus sos inimigos nostros. Et nè nos lasses ruere in sa
“ tentatione; sinò liberanos de male. Amen „.

As a further illustration of the Sarde language, the subjoined fragment of a Sarde song, followed by a literal translation, may prove interesting.

Cando a sos pes de una roca umbrosa
M'incontresi unu die appoggiadu,
Tand'io una Ae chi lesta e festosa
Su olu in una valle hat ispiccadu.
Si parat poi in sa silva orrorosa
Ue su tilibricu est preparadu,
Ispectende s'allegra congiuntura
Pro fagher d'issa una grata pastura.

TRANSLATION.

“ Seated one day at the foot of a gloomy rock. I saw a light
„ and brilliant bird fly downward into the valley. Soon after it
„ flew to the horrid forest where the hawk was lying in wait for
„ a favourable opportunity of seizing it for its savoury prey. „

The titles of the Nobility of Sardinia are Dukes, Marquises, and Counts, but they are generally designated as Barons from the name of their possessions. Some few are absentees, residing in Rome and Turin, and visiting their Sardinian properties in the spring, but most of them live the greater part of the year in the Island, upon their estates, and employ their time in managing their farms and forests, and in hunting, shooting, and other rural pursuits.

The Cavalieri, an inferior class of nobility, have the title of “ Don „ and are very numerous. The army is the profession open

to the higher, and the law and church, to the lower ranks of nobility; all of them enjoy many privileges, but none of them are of any great value or importance.

Barristers (*Avvocati*), of whom there are about 400 at Cagliari and 100 at Sassari, rank next after the nobility in the grade of Society; their fee is not an "honorarium," as at the English Bar, but is matter of arrangement with the clients, and, if not paid, can be recovered at law. The standard of payment is not however high; for an ordinary trial from 100 to 200 francs, and for a very "heavy" case, a fee of 1000 francs (L. 40) is sometimes, but rarely, paid. Attorneys (*procuratori*) occupy a lower position in society, and their name is "legion"; not only do they congregate in large numbers in Cagliari and Sassari, and in all the large towns, but there is not a village with a population of over 500 that has not an attorney, though there may not be a doctor or midwife within 20 miles. A licence or diploma to practice is necessary, and must be preceded by an university examination. The fees are paid upon a "tariff," regulated according to the value of the property, and nature of the business in litigation. The charges in non-litigant cases are however very moderate, and much under the English scale, and yet "the law" is considered the next most lucrative profession after the Priesthood. Litigation is however very expensive in Sardinia, for it is often protracted to inordinate lengths, and rendered needlessly complicated, by the multiplicity of pleadings, as was the case in England not many years ago.

The profession of medicine comes next in order. Here too a University education and Degree are essential preliminaries, and a diploma to practise is necessary. The fees are most moderate, a few francs per visit being the usual charge.

The Island, for administrative purposes is divided into two Provinces, South and North, each of which has its own government, and distinctive characteristics.

The southern Province, of which the capital is Cagliari, is the largest in extent, and the richest in productions, and has nearly

double the population of the northern Province, of which the Capital is Sassari. Each Province is governed by a Prefect, appointed by the King, and holding office during his pleasure. The Prefects are the heads of the administrative and executive departments, and reside at the Capitals of their respective Provinces. The Commander-in-Chief, and the Heads of the military departments, are stationed at Cagliari, and here also are the Courts of Supreme Jurisdiction for the Island. Every Government Department has representatives in the Island, Viz — Finance — War — Marine — Public Works — Forests — Agriculture — Commerce — and the Internal Administration which includes Police — Education — Public Health — and Preservation of Archives and Monuments. Each Department has offices — with a staff of officials and Clerks — at both Cagliari and Sassari.

Every Kingdom and Republic in the Old and New World, with very few exceptions, is represented by either Consuls or vice Consuls, not only at Cagliari and Sassari, but at most of the seaport towns. It is however somewhat singular, that none of the British Consuls or Vice Consuls are Englishmen; they are either Italians or Swiss.

During the Spanish possession, Sardinia had a Parliament of its own, elected by all citizens paying taxes, and comprising the three estates of " Nobles, Clergy and Commoners. ". It was established A. D. 1445 and continued, with some periods of interruption, during successive regimes until recent times. Its functions were to administer the internal affairs of the Island, and to levy taxes. Sardinia now sends twelve representatives to the National Parliament at Rome; they are elected by the communities of Cagliari, Iglesias, Isili, Lanusei, Macomer, Muravera, Oristano, Sassari, Alghero, Nuoro, Ozieri, and Tempio. It also sends to the Upper House three Senators who are nominated by the King, and hold appointment for life. In the National Parliament, there are 500 Deputies and Senators for the whole Kingdom of Italy, which has a population of about thirty millions, so that Sardinia may be said to have its full share of representation in both Houses.

The qualification of an Elector is the annual payment of ten lire (about eight shillings) of direct taxation ; he must also be twenty five years of age, and *in theory* able to read and write, but this latter qualification is generally and easily evaded. A list or register of voters is made out every year by the communal officials, and no person, who is not on the register, is entitled to vote. Each elector has a voting paper sent to him at the time of the election, upon which he signifies in writing the candidate for whom he wishes to vote, and this is deposited by him in a box ; the election generally is conducted something after the manner of the Ballot in our own country. The number of Electors on the Register is about 30,000 — and of these not quite one half record their votes.

There is seldom any excitement at the time of an election, and very little display of public eloquence. Placards, announcing the political and local views of the candidates, are posted up at the various communal offices, and this comprizes all the canvassing that is usually resorted to.

In addition to this national representation, there are two provincial Parliaments called “ *Consiglio Provinciale* „, one for each province; they hold their sittings at Cagliari and Sassari, and are composed of forty members. The electors are citizens of twenty five years of age, paying communal taxes to the amount of five lire (four shillings) per annum. The principal business of the Councils is to look after the repairs of Roads, Bridges, Barracks, Prisons, and other public Buildings, with power to levy rates for those purposes.

The national as also the provincial Parliaments are elected for a period of five years.

Every town and village, with a population of five hundred, has a municipal corporation, the members of which are elected by the inhabitants; they have power to levy taxes for communal purposes, and their duties are to look after the estates, roads, and public buildings belonging to the Commune. The choice of the mayor is very restricted, but generally, and indeed it may be said always, the person of most importance in the village is selected.

The Roman law appears to have been in force in the Island till the 11th Century, and it formed the basis, on which the Papal See, the Pisans, and Genoese, grafted their particular enactments according to the times and circumstances of their rule.

The earliest national code written in the Sarde language, called " Carte di Logu ", was in the time of the Giudici of Arborea, and was promulgated by the Giudicessa Eleanora A. D. 1393.

Don Alphonso V of Aragon, twenty six years afterwards, on instituting " The Corte Generale " at Cagliari, introduced some of the laws then used by the Corte of Catalonia, and this Corte, thus added to and re-constructed, became the general law of the whole Island, under the name of " Capitoli di Corte ". After the lapse of over 200 years, Philip IVth of Spain promulgated (A. D. 1653.) a new code, but based on the old laws, and in accordance with the demands of the Sardes at the time; and such was its liberal basis that it was classed among the prohibited books in the Papal states.

Towards the close of the 17th Century, when Spain had become so involved in war and diplomacy that Sardinia was neglected, the Viceroy, being virtually under no superior control, became arbitrary and oppressive; and disunion, recklessness, and corruption prevailed in all departments. The results soon shewed themselves in the changed moral condition of the people, who took the law into their own hands, and self-will and vendetta were substituted for order and justice; and when the Island came under the Savoy dynasty, its deplorable condition may be easily imagined. Steps however were at once taken to eradicate these evils, and all the laws were collected into one Code, by order of Victor Amedeus III and were published at Cagliari A. D. 1775.

New laws, and alterations of old enactments, were however from time to time rendered necessary, and these became so numerous, that in 1827 it was again found essential to codify and unite them in one collection. All these changes were brought about without any disturbance, or even adverse comments, and the new code, embracing all the alterations, came into force in 1840. This radical

change in the laws and Institutions, and the mode in which it was effected and received by the country, form a wonderful contrast to the course that had to be pursued in Hungary, Sweden, Russia, and Poland, under somewhat similar circumstances, and it demonstrates, in the most marked manner, the different temperaments of the people of these countries, as well as their relations with their Rulers.

The administration of the law is pure, and appears to give very general satisfaction; it may almost literally be said that in Sardinia Justice is brought home to the *door* of every inhabitant.

The Court of first Instance sits in every town and large village, and is presided over by the Pretore of the district. It has civil jurisdiction up to 500 lire, and in criminal cases its power extends to three months imprisonment. Both advocates and attorneys practise in these Courts, but there is no Jury. An appeal goes to the next highest Court, which is called the "Correctional," and is presided over by four officials, namely a president, two ordinary Judges and a public minister called Procuratore del Re. Their jurisdiction in civil cases is unlimited, and in criminal cases extends to five years imprisonment. The next highest court in the Island is the Court of "Assise," which has cognisance of criminal cases only. It is presided over by two supreme Judges, and their jurisdiction extends to all crimes, even where the punishment is death. This extreme penalty is however no longer carried out in Sardinia, indeed capital punishment even for murder may be said now to be practically abolished in the whole of Italy.

The Highest Court of Appeal both in Civil and Criminal cases is to the "High Court of Cassation," in Rome. It is presided over by six judges, and there is no jury. In all jury cases the majority of Jurors decides.

The salaries of the Judges would, measured by our English standard, be considered exceedingly and disproportionately small; they vary from L. 120 a year in the lower Courts to L. 800, which is the highest salary received by any of the Judges.

In addition to these Courts of law there are also tribunals of

Commerce, which are usually resorted to in cases of Commercial dispute or social quarrels. The proceedings are simple and inexpensive, and the decisions prompt; but this tribunal being composed, (with the exception of the president) of commercial men, its decisions are frequently appealed against.

The process of transfer of land is very simple, and, excepting the government stamp, inexpensive, yet, simple as it is, many transfers are made by "delivery of actual possession," without any writing between the parties. The usual and only safe mode of transfer is however by writing, which is recorded in the public Registry office, and then the title is indisputable. The Government duty is an "ad valorem" stamp, of 5 per cent upon the Purchase money, and the lawyers and other charges come to about half as much more.

In the selection of lands, the purchaser should direct his attention quite as much to the water supply, as to the quality of the soil, and, if there be no "living" stream running through the property, he should make himself assured, that there are springs in sufficient supply for all agricultural purposes; and this is equally essential when the lands are in Forest, and whether the trees have been felled or not; for the land must either be pastured or ploughed, and in either case water is a first requisite. Investments in landed property may, by careful inquiry and prudent selection, be made so as to yield a return of from 10 to 15 per cent, if farmed by the purchaser himself, and from 7 to 10 per cent, if let to others; and it is a curious anomaly, that House property, either in towns or large villages, cannot be purchased to yield more than half that rate of interest. This is the very reverse from what is the universal rule in most other settled countries.

It must also be borne in mind by an intending purchaser, that in Sardinia, as also in the rest of Italy, the Imperial land tax, as also the Provincial and Communal taxes, are all payable by the Proprietors; and that this taxation is very heavy, in some cases amounting in the aggregate to 50 per cent upon the rental, as fixed in the Cadastro of 1851. The Cadastro is a "cross" between our

Doomsday Book and "County Valuation Roll," and the rents there scheduled are fortunately much below the present letting value of the lands; for if assessed on the actual rental value, the taxation would be almost intolerable.

The remedy for non-payment of taxes is very summary, and after a few formal notices, extending over two or three months, the lands are put up for sale by auction. These sales are continually taking place, and if the lands are not sold, (as is generally the case), the former proprietors are re-instated in possession as care-takers, and much of the hardship of their position is thus mitigated.

Feudalism was introduced into Sardinia in the middle of the 11th Century, and was, in all its arbitrary oppression, continued till A. D. 1636, when Philip the IVth defined by a legal Code the relative powers and duties of Baron and Vassal. The Savoy Dynasty initiated further reforms of several abuses, which had again crept in, but so great was the hatred of the system that there arose a general insurrection. Sassari, where most of the nobles resided, was besieged by ten thousand men, and the nobles fled, leaving their houses to be pillaged. A protocol was then signed, depriving the Barons of the power, amongst other things, of administering justice or appointing officers for that purpose, which was the great grievance, and though these provisions did not give entire satisfaction to the vassals, yet they had the effect of checking the Barons, and the sore was temporarily healed. A radical cure, however, was not effected till the Year 1856, when feudalism in every form was absolutely and entirely abolished.

The military force in the Island, besides the Commander in Chief and staff, consists of two Regiments of infantry, a detachment of "Bersaglieri," (Rifle-men) and "Genio Militare," (Royal Engineers), and two batteries of reserve Artillery, numbering altogether between two and three thousand men. The head-quarters are at Cagliari and Sassari, but small detachments are stationed in several of the large towns.

In addition to the military forces there are, for the maintenance of public security, the "Carabinieri," a kind of military police,

and the " *guardie di pubblica sicurezza* ", who are the police proper; and in the towns there are also the " *Guardie Civiche* ", paid by, and under the control of, the Municipalities.

It is difficult to ascertain with any exactitude the Revenue from indirect taxation, but it is not far from accurate to take the import and the export duties, and the monopolies of Salt and Tabacco, rents and royalties from forests, lands, mines, fisheries, and other sources, at about L. 150,000 a year. The proceeds of taxation are applied to the repairs of the national Roads, Bridges, and the Postal service, but no details of either receipts or expenditure are officially published. The direct taxation is very heavy, and presses hardly on the lauded interests and especially upon the smaller proprietors; moreover in Sardinia, owing to the thinness of the population, the land-tax is more onerous than in the rest of Italy. In Tuscany, the average land tax per head of Population is stated to be 3.40 per cent a year, in Sicily 3.61 per cent, in the Neapolitan provinces it is 4.72, and the general average of the whole of the Italian kingdom is 4.70; but in Sardinia the landtax, actually levied, amounts to close upon 4 million lire per annum, and this, divided by the total population, shews a tax of nearly 7 lire per head, being 40 per cent higher than the average taxation of the whole Kingdom; and as the total extent of land under cultivation is under one million acres, this would give a land tax of over 4 lire per acre, which is very nearly equal to 50 per cent upon the letting value of the lands, or of the net profit upon the produce, after payment of seed, labour, and other expences. This of course is exclusive of Provincial and Communal taxation, and it is exclusive also of the income tax, which is levied upon all business profits, and amounts on an average to 13 per cent.

The Ports, as a rule, are the natural bays or gulfs of the sea, and except at Cagliari, Carlo Forte, Alghero. Porto Torres, and Terranova, very little has been done in the past in the way of works, or protection; now however new and extensive harbour works are in course

of construction at Cagliari, Bosa, Portotorres, Golfo Aranci, Terranova, and Tortoli.

The principal articles of export are salt, minerals, charcoal, cattle, wool, wines, oils, and skins; and of import, drapery, woollen and cotton goods, Groceries, leather etc. The tonnage of exports is nearly ten times as great as that of imports, and are rather more in value than the former.

According to the last official returns, the number of vessels, (sailing and steam) engaged in the trade of Sardinia or touching at Sardinian ports, was over 10,000, including international, as well as coasting vessels, with an aggregate measurement of about $1\frac{1}{4}$ million tons.

The countries, having the greatest interchange of trade with Sardinia, are Africa, France, Spain, and Denmark, and at a long distance behind (excepting, for minerals) come England, Belgium, and Sweden. About one half of the foreign trade, and nearly the whole of the coasting trade, is carried on by vessels under the Italian flag. In addition to the freight-transport vessels, are several lines of Steamers, carrying passengers, mails, and light goods, plying between the various ports of the Island and the mainland. The ports of Cagliari, Carloforte, Oristano, Bosa, Alghero, Portotorres, Santa Teresa, Maddalena, Golfo Aranci, Terranova, Siniscola, Orosei, Tortoli, and Muravera are in direct communication with each other, and with Genoa, Leghorn, Civitavecchia, Naples, Palermo, and Tunis. All these lines are subsidized by the Italian Government, who pays annually many millions of lire to the Navigation Company, who in return carry the mails.

From Portotorres there are French steamers, plying regularly to Ajaccio in Corsica, and to Nice, and Marseilles.

It is, however, most strange that the Sardinians themselves, considering the geographical position of their country, should show so little taste for maritime pursuits. The total number engaged on the sea does not exceed 4000, of whom nearly two thirds are from the small Islands of Maddalena and San Pietro alone, and this is

not one tenth the proportion Sicily provides, and the tonnage of her merchandise is not quite double that of Sardinia.

Many reasons have been assigned as the causes of this extraordinary phenomenon, for it can be described by no other name; and the generally received opinion appears to be, that the life of continuous troubles and conflicts on land, in which the Sardes have been involved from time immemorial, is almost sufficient in itself to account for it, especially with a people, so wedded to old traditions and habits, and so little given to change, as the Sardes are.

CHAPTER VI.

Land — Extent — Proprietorship — Tenure — Division — Transfer and mode of Letting — System of cultivation — Ploughing — Sowing — Harrowing — Harvesting — Thrashing — Wheat — Barley — Oats — Beans and Peas — Cattle — Cows — Sheep — Goats — Pigs — Mules and Asses — Horses — Government Stud — Vines — Olives — Oranges and Lemons — Fruits — Flowers — Vegetables — Tobacco.

The Island comprises, as we have seen, an area of rather over 10,000 square miles, equal to about 6,500,000 English acres, which may be approximatively subdivided as follows; viz, one third arable, i. e. suitable for the growing of cereal crops; one third pasture and mountain land; one fifth forest; and the remainder (about 800,000 acres) orange groves, vineyards, olive orchards, and gardens.

The proprietorship of the land is vested in the Government, the Communes, and private individuals. Government and the Communes own about two fifths of the whole, divided between them in equal proportions, and the other three fifths are the property of private persons.

The Government lands, (a great portion of which are in Forest), are let on lease, or from year to year, at reasonable, and indeed low, rates; but with power to resume possession at any time without compensation, in the event of a sale. The terms of sale and the

price are by agreement, and are favorable to intending purchasers; a payment of 10 per cent only is required on the signing of the contract, and the remainder of the purchase money may be paid by equal instalments during 30 years, with 6 per cent interest in the interval; if however, the land be in forest, no trees can be felled until the whole, or a proportionate part of the purchase money, has been paid.

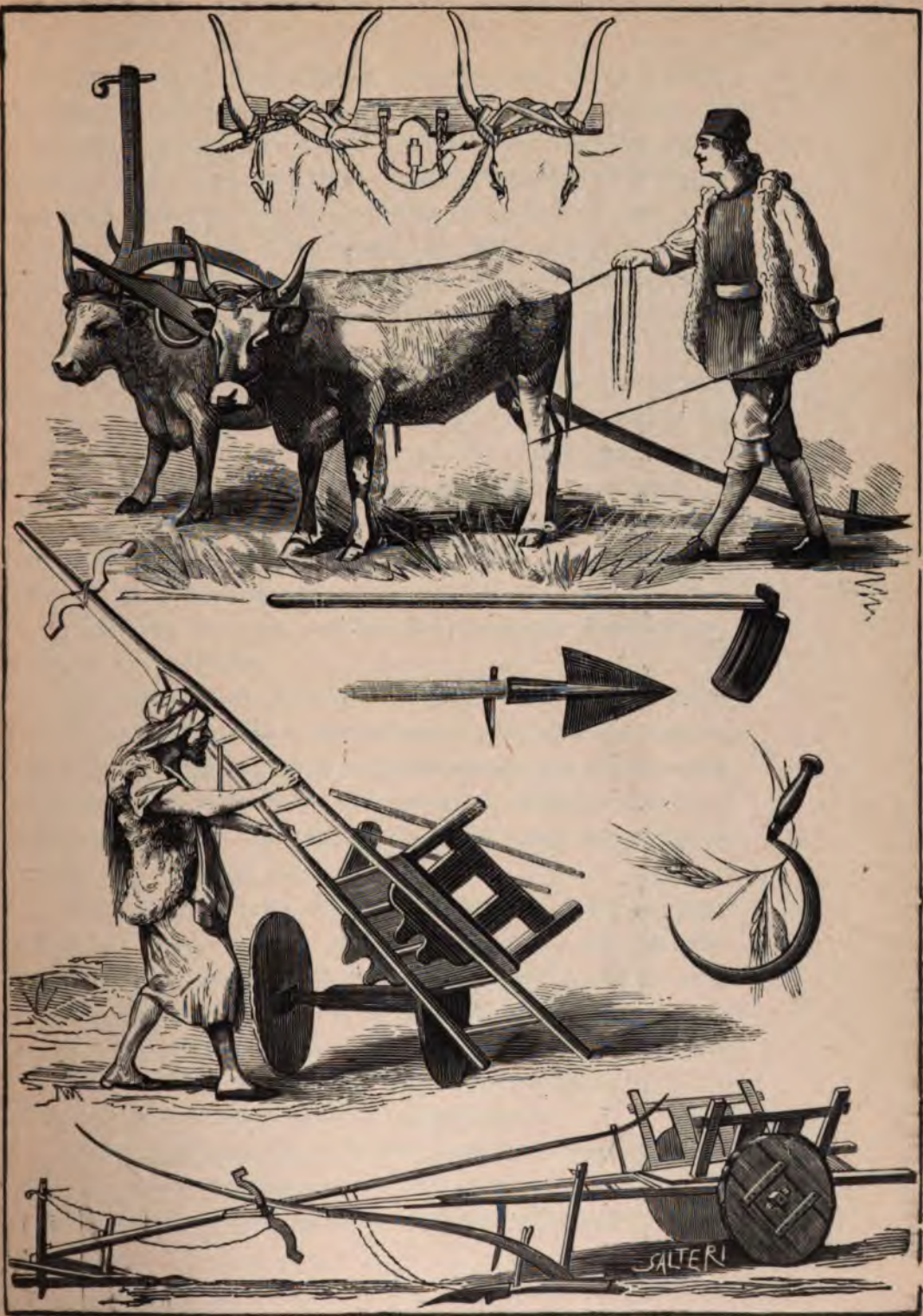
The Communal lands are also let, either on lease, or from year to year, but in a very few years the Communes will possess no corporate property; a law having been recently passed, compelling the division and apportionment of their lands, rateably amongst the landed proprietors within the Commune.

The sums to be paid for these apportioned lands are fixed by the surveyors of the Commune, assisted by 3 experts, and are considerably below the market value. The proprietors draw lots for their portions, and a period of several years is allowed for payment of the purchase money, with a moderate rate of interest in the meantime; if any proprietor declines his lot, it is sold by auction.

The proceeds of sales are applied, either in extinction of Communal debts, (and most of the Communes have borrowed money for the making of roads and supplying their towns with water), or in the construction of municipal buildings, or in other useful or productive works for the public good.

Lands owned by private possessors are, generally speaking, held in small lots, and are farmed by the owners, but there are several large properties, varying in extent from 10,000 to 30,000 acres, belonging to the Sardinian Nobility and Gentry, and which have continued in the same families for centuries, and handed down in direct line for generations; these proprietors, as a rule, reside in the cities, or chief towns of the Island, nearest to their Estates, of which they farm a part, and let the rest.

The smaller properties, however, frequently change ownership, either by sale and transfer, or under a judicial order for nonpayment of taxes.



Sarde Agricultural Implements.

The letting of land generally throughout the Island is either on lease, or from year to year. If the land be arable, the rent is usually paid in kind, and is based upon a fixed proportion of the gross produce. That proportion, if the proprietor provides seed and pays half the cost of harvesting, is one half; but it is reduced to one fourth, if the tenant finds these, as well as labour. There is a common thrashing ground in every Commune, to which all the produce is carted, and there thrashed, and the apportionment is made before removal.

If the land be in grass, the letting is either for a fixed sum per year, or, what is more usual, the right of grazing only is let, and the rent is graduated according to the number and sorts of animals pastured, very much on the same principle as "agistment," in many parts of England. The sums paid vary according to locality, and quality, of the pastures, but in most cases 25 shillings is the price for the pasture of a horse for the season, 15 shillings for a cow, 5 shillings for a pig, and from half-a-crown to 3 shillings per head for sheep or goats.

The cultivation of the land is the staple industry of the Island, giving employment, directly and indirectly, to at least four-fifths of the working population, and it is surprising how few improvements have been made in the mode and system of cultivation, indeed, if ancient histories are to be believed, the Island is far less productive now, than it was 2000 years ago.

The same plough and mode of ploughing the land, the same system of sowing the seed, the same harrowing, and the same reaping and harvesting, the same mode of thrashing, and the same carts and mode of yoking the oxen, indeed all the ancient agricultural implements, and all the old customs of 2000 years ago, are perpetuated in the present, and it would seem to be almost impossible to induce any change or improvement.

Improved ploughs and other implements have been introduced and their superiority demonstrated, but except on a few farms, in the Campidano, the old articles are preferred and adopted.

As a rule, the cultivator of the land is the owner, and as he has no rent and no wages to pay, his only outlay is the payment of taxes, and for seed, and as the latter is generally saved from the preceding year's crops, and the return on an average is about twelve-fold, the surplus, beyond what is needed for home consumption, is sold; a considerable portion of it is sent to market, and when to this are added the sales of the produce of the sheep, cows, horses, pigs, and goats (for every farmer keeps more or less live stock of some sort or other on his land) the aggregate receipts amply suffice for all his requirements.

Many rural households too card and spin their own wool, and weave it into cloth, for the use of the family. The spinning wheel and loom are of the most antiquated description, but they answer their purposes, and the farmers are content. The skins of sheep, with the wool on, provide the coat and waistcoat of ordinary use, and even the village tailor is seldom called into requisition.

The agricultural products comprise wheat, (of which there are two sorts, the bearded and smooth), barley, beans, indian-corn and spanish peas. Green crops, such as turnips, mangold wurzel, vetch or seeds, are absolutely unknown to the general Sarde farmer, but on the few farms cultivated by Englishmen, these crops are being introduced with most beneficial results.

There cannot properly be said to be any system of cultivation or rotation of cropping, but the most usual "course," is after barley to grow two crops of wheat in succession, and then to let the land rest, or rather to sow itself down to grass, and in that state it remains for 4 or 5 years, during which period it is pastured; and then a fresh start is made with a crop of barley, in some cases, preceded by a crop of Peas or Beans.

The mode of raising the various crops, is as follows.

Wheat. The land is ploughed in the Autumn, as soon as the rains have sufficiently moistened the surface to enable the wooden plough to enter the ground. Each plough is worked by two oxen, yoked by the head, and driven by one man. The breadth of the

furrow is about 10 inches, and the depth of soil turned over is not more than 4 inches. An average day's work, for a yoke of oxen, is $\frac{1}{8}$ th of an Hectare, which is equal to about one third of an acre. The ground is ploughed twice, the second time in December; it is then sown, the quantity of seed being 100 litres to the hectare, a few weeks afterwards it is harrowed, and nothing further is done to the land, or to the growing crop, till the corn is ready to reap. In June reaping begins, and as rain is unprecedented at this season, harvesting is a shorter and more simple operation, than either ploughing, sowing, or harrowing.

In reaping, the ears of the corn, with about one third of the Stalk, are cut off, and the remainder of the straw is left standing; it is afterwards set fire to, and the ashes thus made form the only "dressing", or manure that the land ever receives.

Thrashing is done either by oxen or horses (generally the former) treading out the corn from the ears, by traversing round and round a circle about 20 yards in diameter, the ears having been spread evenly over the whole surface; a large flat stone, weighing about a hundred weight, is dragged behind the beasts, and acts the part of the flail, that was in general use in England not many years ago. A fair average crop of wheat is about 12 times the quantity sown.

Barley. Ploughing for this crop is done in February and March, and the seed, (about 150 litres per hectare) is sown immediately after ploughing. Barley is reaped before the wheat, and as the straw of both is good food for oxen, and much liked by them, after the thrashing it is collected, and preserved in stacks, for winter consumption. An average crop of Barley is about 15 times the quantity sown, although it has been known to yield as much as 30 or 40-fold.

Oats are very rare crop in Sardinia. The ploughing sowing and harrowing are the same as for wheat; the seed sown is about the same quantity per acre as barley, and the return is about 12-fold.

Beans and *Peas* not so generally grown as wheat or barley.

The land is ploughed in October and November, and harrowed at the same time; both peas and beans (about 25 litres to the hectare) are dribbled in by boys, and the produce is about 15-fold. They are cut in early summer, at the end of May or early in June, and are the first crop reaped. The harvesting of them is the same as for cereals, and the straw is cut "long", and preserved as food for asses, by whom it is much liked.

Flax and Hemp are cultivated in some districts, but in small quantities. The quality is good, and the soil and climate suitable for their growth, but the scarcity of water, and the danger of fouling what little there is in the processes of retting and steeping, is a virtual prohibition against extended cultivation.

Cutting grass for hay is very rarely resorted to; the grass, during winter and spring, being in fact better pasturage than during spring and summer, and the climate is such, that the cattle can "pasture out", all the year round.

Wheat barley, beans and peas are the only corn crops sold. The price of the former varies from 12 to 24 lire per hecto-litre, barley from 6 to 10 lire, and beans and peas from 12 to 17 lire; but even at prices below the lowest of these, either crop will amply repay the cost of production, and it is deeply to be regretted that no means or inducement can be found to promote increased cultivation.

Second only in importance to agriculture, indeed it may be said to form an integral part of it, are the breeding and feeding of live stock.

The vast tracts of mountain and forest, the greater portion of which are covered with excellent herbage and afford good pasture, as well as the grazing of the agricultural lowlands after the crops are reaped, or when they are resting in fallow, provide almost unlimited pasturage for the herds of cattle, horses, pigs, sheep, and goats, that are scattered over the Island, and which may also be said to be almost unlimited at the present time. According to the latest returns, the numbers of cattle, sheep, horses, pigs, goats, asses and mules in the Island are as follows-viz.

1st Cattle, the total number of all and ages sexes are 172,561, of which about 70,000 are draught oxen, and the rest breeding cows. 2nd Sheep, number altogether, 794,000, of which 524,690 are ewes. 3rd Pigs are returned at 51,384, rather over one half of them being sows. 4th Goats number 221,317 in the aggregate, but are not classified. 5th Horses shew a total of about 47,000, of which more than two thirds are mares. 6th Asses and Mules, the former numbering 27,695, and the latter 385.

These figures, though given officially, are however generally believed to be much under the real numbers; indeed it is currently reported in the Island, that some of the returns do not represent one tenth of the actual stock kept; one farmer, who had upwards of 1000 Pigs pasturing in his forest, returned the number at 100, in order to avoid, or rather reduce, his taxation. This no doubt was an exceptional case, but in nearly all cases, not only of pigs, but of other kinds of stock, the numbers are greatly under-stated, nor is it much to be wondered at, seeing how heavily taxation presses.

The official statistics shew the number of farmers of all sorts to be about 40,000, and this may figure be taken as very nearly accurate.

The original breed of Sarde cattle is small and ragged, not much larger than the smallest of our West Highland breed, but short and thick, with long horns, and either red or dun in colour, and seldom weighing more than 400 lbs. There have however been so many crosses, first with " Sicilian " to give more size, then with " Swiss " to give more milk, and latterly with Tuscan, and English Shorthorns, to give earlier maturity, that the original breeds are gradually becoming extinct; but the cattle are much improved both in appearance and in bulk, and a fair average cross-bred beast will weigh between 1000 and 1200 lbs.

Heifers have their first calf at two years old, and breed till nine, and, when barren, they are sold, direct from the grass to the butcher, at prices varying from 200 to 350 lire.

An average cow will give 6 litres of milk per day, besides keeping her calf. In one dairy of 80 cows, which I visited, all the milk was made into cheese and butter, and the quantity of cheese produced per day was 30 lbs "superior," worth 10 pence, per lb. and 60 lbs of "common," worth 3 pence per lb; besides 8 lbs of butter, which sells for one shilling per lb.

Bullocks begin to work at 3 years old; they are first yoked with old steady animals, for a few weeks in the autumn, then left till spring, when they are again yoked, first for light ploughing and harrowing, and then for heavy cart-work. When at hard work, a feed of straw and beans is given in the middle of the day, but, with this exception, they live out of doors on the pasturage they can pick up, as do also the cows, both summer and winter. A good yoke of young oxen will sell for 700 or 800 lire; and a good fat beast, ready for the butcher, will sell for 500 lire. The flesh of the working oxen is scarcely distinguishable from that of cows or heifers.

The Sarde sheep is not unlike our Welsh breed in size and appearance, but about one half of the flock have black wool, and the other half, white; the old original breed is, however, like the Sarde cattle, very nearly extinct, except in remote mountain districts. The sheep have been largely crossed, first with the "Merinos," to improve the quality of the wool, and second with the "Downshires," to increase the size, and a wonderful change for the better has been effected.

A Sarde ewe can be purchased for 5 shillings, and a Sarde Tup for 12 shillings, and young lambs sell for about 2 shillings each. The wool (a sheep will clip on an average about 3 lbs) fetches 4^d per lb. black, 5^d white. The "wethers" are sold at two years old, and average about 12 shillings each; the old ewes of 7 years old, when they have ceased breeding, realise about 5 shillings, each.

The improved breeds fetch more than double these prices, and the wool is at least twice as valuable.

The ewes "drop" their lambs in December and January, and

rarely exceed one lamb; one shepherd, with his dog, can look after 400 sheep, and his wages are one shilling and six-pence a day.

Cheese is made largely from the milk of ewes. The produce from every 50 sheep per month will average 400 lbs of cheese, and this, at 3^d 1/4 per lb (the average price), forms no inconsiderable part of the profits of Sardinian sheep-farming.

Goats which were formerly kept in enormous quantities, are gradually diminishing in number, as they are not so profitable as sheep, and require as much food and attention. The main profit, except the small sum derived from the sale of the milk, is from the sale of the kids, which sell at from 3 to 5 shillings each; their chief value is derived from their skins, though the flesh of the kid is not to be despised. In a few years there will be no goats on the Island, except in those wild rugged rocky districts, where sheep will not thrive. Goats, like sheep, seldom produce more than one young, and they generally breed in December or January.

Pigs are kept in large numbers, and yield most profitable returns. The original sarde breed is an ugly brute, of "medium" size, and tawny colour, with long strong bristles and "Snout", but the crosses with the Neapolitan, and latterly with our Yorkshire breed, have greatly improved them both in appearance and weight.

They live principally in the Forests, and keep themselves, feeding on grass, roots, acorns, chestnuts, and wild olives, which give the flesh a most delicate flavour. They breed twice a year, and have from 6 to 9 young at each litter, but not more than 3 or 4 are usually reared. "Porkers", are worth from 15 to 18 shillings a piece, at 6 months old, and weigh from 30 to 35 lbs. A good 2 year-old home-reared pig will weigh 400 lbs, and is worth L. 6.

The breeding of horses is becoming a great industry in the island, and, with continued care and attention, may be turned to most profitable account; and it is capable of almost unlimited extension.

There are three different sorts of horses, so different as to amount almost to distinct breeds. The large breed of horse is a strong

compact animal, measuring nearly 15 hands in height; the Sarde "cavallo," measuring 13 hands, is a lighter animal, shews more "breed," and has good paces, and is used generally either as a hack, or for light work; and the small breed, which is a pony and not more than 11 hands high, is a hardy, useful animal, sure-footed and very safe, and can carry a good-sized man with ease and safety over bad roads for long distances.

The farmers are the chief breeders of horses, though there are some special breeding establishments in the Island, which deserve special attention. Every farmer, however small the extent of his land, keeps a horse, which is *always* a mare, and during the summer, whatever the journey or the work (even when taking part at a Caccia Grossa or leading stones), the mare is invariably accompanied by her foal, who takes every opportunity of stealing a meal from its mother, whenever the opportunity presents itself. The larger farmers keep a proportionately greater number of horses, but nearly all over 2 years of age are mares. It is estimated that there are not less than 30,000 farmers who breed horses.

Colts are sold generally at 2 years old, as soon as they have been handled and partly broken, and a ready purchaser is found in the Government, who have purchasing agents always travelling for the purpose in every district. The price for a good sound colt will vary from £. 16 to £ 24, according to size and quality.

The stud horses are either of Arab, Syrian, or English, blood and are provided by Government, which has an establishment in the island for the purpose; they are sent round to the various villages and farms, and, where a large number of mares is kept (and there are farms where there are over one hundred mares), special horses are selected from the stud, which remain at the farm for the season i. e. from March till July. In both cases the charges are most moderate, the object being to encourage and improve the breed of horses for military purposes.

A fairly good sound mare is worth £. 20, at 3 years old, at which age they generally have their first foal.

Much encouragment and attention have been given to the breeding of horses from very early times. During the Roman dominion, Valentinus had a breeding stud and establishment in the Island, and in the 14th Century, the feudal Barons were bound by law to keep a certain number of horses, and of a certain breed; and during the reigns of Philip the II and III, stringent regulations were enforced for the maintenance and improvement of the breed. The present Government is most wisely following in the same course.

It may be said of the Sarde horses generally, that, though small, they are very enduring, and can carry heavy weights, have many good points, and are very docile. The pace at which they generally move is about six miles an hour, between an amble and a trot, called "portante", and the motion is easy and agreeable. The "Portante", is taught by tying together with ropes the two hind legs and two fore legs of the horse, with a connecting rope so as to keep the other ropes from the ground, and then by pulling the right and left side of the bit alternately, with corresponding leg pressure, the animal is forced to use his two near and two off legs together, and this gives the easy action which is desirable.

There is another useful animal, which, though insignificant and despised, must not be overlooked, as it forms a most important part of every farm, and indeed of every household; and that is our patient and long suffering friend—the ass. Every villager, who cannot afford a horse, keeps an ass, who lives in the house as one of the family. He grinds the corn into flour, he carries the fire-wood, and performs every other menial office that is required of him, and last though not least of his useful attributes, he feeds himself. In each village of the Campidano is some old man who has charge of all the asses of the place, which sometimes number 300 or 400; his duty is to look after them, when wandering and feeding, and for this he receives for each ass tenpence a year in cash, and a loaf of bread, payable at Christmas.

A good ass is worth from 30 s. to 35 s. and a foal sells for 5 shillings. They are exported to Naples in large numbers.

There are very few mules in the Island and they are small in size, and poor in quality. Poultry of all descriptions — hens, ducks, geese, and turkeys — are kept in great quantities, and yield a profitable return.

The wages of a farm labourer vary from one to two shillings per day, according to the man and the work; women and children receive from 6 d. to one shilling per day.

The farm-houses and farm-buildings in Sardinia are not situated, as in England, and in other agricultural countries, upon or near the lands which constitute the farms; they are aggregated together in villages or towns, which are invariably built on the slopes of the nearest mountains, and the houses are so closely packed together, that they have the appearance, at a short distance, of having one continuous roof, from the lowest to the highest on the mountain side. These buildings impart the general impression of resemblance to a flock of frightened sheep, huddled together for safety and protection, and no doubt the situation and composition of the villages owe their origin to the same causes, viz protection and defence against danger, to which however should be added the fear and prevention of malaria.

In connection with agriculture, the cultivation of fruits and vegetables, and of tobacco, for which the climate and soil of the Island are peculiarly adapted, may be conveniently classified.

Among the most important of these industries is the culture of the vine. The wines of Sardinia are excellent in quality and might be cultivated to an almost unlimited extent. Until late years very little attention has been paid, either to the species of vine planted, or to the extension of its cultivation; now however great activity is being displayed in this branch of agriculture, and each year is adding largely to the acreage of ground under vine cultivation, and great care is taken in the selection of the kind and qualities of the plants.

It is said that there are in the Island between twenty and thirty different species of grapes, the most prized among which are, the

Malaga (or Malvasia), very similar in taste to a strong white Hermitage; the Moscato or muscat, also a white wine of delicate and perfumed flavour; the Torbato, similar to the Mangarilla of Spain; and the Giro, like the Tinto of Alicante.

The ordinary wines are good and sound, and, from their great strength and body, are exported to Genoa and Bordeaux, to mix with the weaker wines of those countries.

The consumption of wine in the Island itself is very large, but, there being no duty upon it, no official or authentic record of the quantity is obtainable. As however it is drunk freely by *all* classes at *all* meals, and as well by labourers in town, as in the country, the quantity must be enormous. The price varies from one shilling a gallon for the best, to 6^d per gallon for the ordinary red wine, equal to about one penny per bottle. The quantity exported forty years ago was not quite 3500 pipes; it now exceeds ten times that quantity, and is each year increasing.

The Phyloxera, which has created such grievous devastation in the Burgundy and Bordeaux districts in recent times, made its appearance two years ago in the northern districts of Sardinia in a mysterious and unaccountable manner; it has fortunately not spread into the south, where the most extensive vineyards are; and as the affected regions are separated from the rest of the Island by sandy plains and barren rocky tracts, it is hoped and believed that it will not extend further.

Many suggested remedies have been tried for the cure or prevention of this terrible pest, the most simple however appears so far to have been the most effective, viz, the keeping of large numbers of hens in the vineyards, where small wooden houses are specially erected for their accomodation, and these useful animals busy themselves incessantly all day long, in picking the insects from the vine stalks, and so keen are they in their search, that scarcely a single insect is left undiscovered or uneaten.

In summer, fresh grapes, both red and white, are a favorite article of food amongst certain classes, and, with bread and cheese

or ham, constitute the Sarde dinner and break-fast, and, though a curious compound, form no contemptible meal.

In Winter, the staple articles of food for the lower classes are beans, potatoes, tomatoes (which have been cut and dried in the sun), Chesnuts, (also dried and peeled) and acorns, made into pulp and baked, in which state it will remain sweet for many months.

Dry raisins and figs are not made in any great quantities, and yet both might be made to almost any extent, and both are excellent. The best raisins are made in the neighbourhood of Alghero, from a peculiar species of grape called Galoppo, which is looked upon as the choicest fruit, and is specially reserved for raisins; not however for sale, but as presents to friends and customers. The process of preserving them is rather elaborate. Before the grapes are fully ripe, the leaves are cut off, so as to produce rapid maturity; they are then exposed in the sun, for several days, in baskets of "fennel", which impart a peculiar flavour; they are then dipped in a mysterious liquor, the secret of the composition of which is known only to a privileged class of peasants, who regard it as a sort of hereditary property. It is however a well-known secret, that ashes, laurel leaves, and aromatic plants form part of the mixture, which, when boiled, is of a dark red colour. The grapes are dipped in this liquor, when boiling hot, for a few seconds, and great care is taken that they do not touch the ashes, which are at the bottom of the cauldron; afterwards, they are replaced in the fennel baskets, and dried in the sun for about ten days.

Many thousands of these baskets are thus prepared every season; they weigh from 20 to 25 lbs each, but none are to be purchased; the whole being disposed of as presents, for which however, equally if not more, valuable presents in kind are expected, and received in exchange.

The olive groves stand next in importance; olives are not only largely cultivated, but grow wild in nearly every forest. The olive, like the cork, must be cultivated, to obtain its full product and value. This is done by lopping off all the shoots and small branches, and

grafting the cultivated olive on the " stumps "; and in 3 or 4 years the wild tree will yield the cultivated fruit. The annual average net produce of an olive tree in the forest is estimated from 1 $\frac{1}{2}$ to 2 lire, and the cost of grafting can be contracted for at 1 lire per tree.

The yield of a cultivated olive tree in well kept groves is, however, more than double, in quantity and value, of those in the forests. The olive tree attains to no great height or size, but lives to a great age; the wood is valueless except for burning. The making of oil from olives is specially referred to afterwards, amongst the trades and manufactures of the Island.

Next in extent and importance are the groves of oranges and lemons, and of these by far the most valuable and interesting are those of Milis, which are not only the best in the Island but are considered to be as fine as any in the World.

They extend in length about three miles, and are one mile in breadth; the number of full-grown bearing trees is upwards of 300,000, beside the younger trees and plants, which it would be impossible to count. Many of the old trees produce from 400 to 500 oranges each, but taking all the bearing trees, old and young, a low average would be 200 each, and this would give an annual produce, from these groves alone, of over 10,000,000 separate fruit. This estimate is, however, according to local authorities, much below the actual number. The " Boles ", of several of these trees are six feet in circumference, and they stand about twenty feet high.

It is asserted, (but there does not seem to be any sort of record about it) that these plants were introduced into the Island in the 11th Century, but, whether this date be correct or not, there can be no doubt that many of the Milis trees are several centuries old.

The various species of oranges grown here, and in other parts of the Island, are those known as the " bitter ", orange (*Citrus Brigardia*); the chinese (*Chinotta*); the bloodred (*Sanguigna*); the Norgon-gola of the Italians, and the " Arrangi de crosa sottile ", closely resembling the " Saint Michaels "; amongst the Lemons are the

* *Limoni naturali* „ or the common lemon. * *Limoni dolci* „ or sweet lemon, and * *citrus medica* „, or citron.

The first season oranges come from the Ogliastro district, but in other respects the “ *Milese* „ and *Domus Novas* fruit are superior, and this is owing, not to any particular system of cultivation, but to the nature of the soil, and its thorough irrigation by the small river that runs through the groves. The trees, when in full flower, perfume the whole neighborhood, with an odour almost too powerful to be agreeable; and, so dense is the foliage, that the sun's rays never reach the decaying blossoms, which have fallen from the trees. The first appearance (says Mr Tyndale) of these groves “ excites neither astonishment nor admiration. It needs a walk under the canopy of their boughs, and hours of contemplation, before the beauty and novelty of the scene can be realised and appreciated. On the same trees may be seen the pale blossom, the green fruit, and the ripe orange, and if, in like manner, the innocence of infancy, the freshness of youth, and perfection of manhood, could be combined, what a happy phase of existence would be created. Could we not take a lesson from these silent teachers? „

Many other fruits including Figs, Pomgranates, Peaches, Apricots, Plums, Apples, Pears, Cherries, Strawberries, and a variety of others, grow in great profusion, and might be cultivated to almost any extent. No attempts, however, either at exportation or preservation — both of which would be feasible at little cost or trouble — have ever been made, and these industries *might* and *ought* to be carried on with great profit.

There are no gooseberries, currants, or raspberries grown in the Island, but blackberries are abundant.

Vegetables of all sorts thrive naturally, and no manure is ever applied. Potatoes, tomatoes, asparagus, peas, beans, cauliflowers, greens, spinach, lettuce, cabbage of several kinds, turnips and carrots are plentiful, fine, and cheap. Many of them can be produced at all seasons of the year.

Flowers grow wild in such numbers and variety that there is

no need to cultivate them. Almost every flower seen in our English gardens may be found in Sardinia, and in addition many that will not thrive in our climate, such as cactus, aloes, date, palms etc., all which grow most luxuriantly.

Wild flowers grow in the forests, on the mountains, and in the plains, in infinite profusion, and are surprising in their colouring and richness. They comprise several hundred different sorts, many of them rare and remarkable, but unfortunately I am not sufficient of a botanist to attempt any description; some estimate, however, of their numbers may be formed, from the fact that their names alone occupy several pages of a Latin Poem of hexametres and pentametres, which, through neither poetical nor classical, is descriptive and ingenious.

Tobacco was first introduced into the Island during the Austrian occupation A.D. 1710, and its manufacture was constituted into a Royal Monopoly six years afterwards; this was so unpopular at the time, that it led to an insurrection, which, however, was soon quelled, and the tax permanently established.

In the Sassari district, where the best tobacco is grown, the quantity produced in 1881 (which is the last return obtainable) was 164 tons, in 1871 the quantity was about 100 tons. The extent of land under this crop is about 500 acres, and each year it is being extended. The growers of tobacco sell their produce raw to Government at a price, either agreed upon, or fixed by arbitration; but the cultivators are obliged to sell, and the Government is under an equal obligation to purchase, the whole produce. The value of a ton of raw or un-manufactured tobacco varies with the season and the quality, but about 1000 lire (L. 40) may be taken as the average price.

Mushrooms abound, and are to be found in almost every part of the Island, and attain to a large size; but their flavour is not equal to our English mushroom.

There is however a bulb called * *Tavura de arena* *, something between a potato, a mushroom and a truffle. It has a dark skin, a soft interior, and a pleasant taste, more resembling that of the truffle

than the mushroom; it is found in greatest perfection in the months of March and April; there are special "Tavura Hunters," who pierce the ground, where the bulb grows, with a sharp pointed stick, and, when the bulb is touched, a sound is produced, as if the air were escaping, which is the certain test of its presence. They are dressed as truffles, and are much esteemed in the Island as a great delicacy, as indeed they would be in any country.

From the preceding remarks upon the agricultural pastoral and horticultural condition of the Island, it will have been observed, that the two latter have made rapid strides in advance; that animals of every breed have been greatly improved, and that the state of improvement is progressive; and that much attention is being paid to the cultivation of vines and other fruits, and their cultivation is being largely extended. It is, however, far otherwise as regards agriculture, for which the soil and climate of the Island are admirably and specially adapted; and here very little has been done or is doing, and indeed it may be said to be retrograding, rather than advancing.

According to the old historian Diodorus Siculus, the Carthaginians coveted the island for "its richness and fertility," and fought many battles to gain it, and though, when they got possession of it, they at first restricted agriculture, yet they afterwards did all in their power to encourage it; and, when the Romans dispossessed them, it was, according to Polybius, another faithful historian, "most fruitful and productive." Horace speaks of "opimas Sardiniae segetes feraces;" Cicero calls it "A granary of the state;" Pliny mentions "supplies for the Roman army and navy being obtained from it;" and in the last year of the 2rd Punic War, it is on record, that large "granaries" were built in Rome to receive "Sardinian corn." Plutarch too, speaks of Pompey's visit to the island, for the express purpose of purchasing grain; and Pausanias refers to Sardinia as "most fertile and prosperous." Prudentius and Claudian also speak of it as supplying the Roman granaries, and Salvian in the 5th Century, when lamenting the losses of the Roman Empire speaks of the invasion of Sardinia as the "cutting off its vital veins."

This concurrent testimony can leave no doubt but that during the 700 years of the Roman occupation, the Island was most productive, and it is authoritatively stated, that, during this same period, the population amounted to two millions; agriculture must therefore at that time have been in a much more advanced state, and a much greater extent of land must have been under cultivation, than at the present. The population now is not one third in number of what it is said to have been then, and the home consumption must of course have been proportionately larger, and yet the present exports of grain are insignificant, compared with what they must have been, if we are to believe contemporary historians, in ancient times. It is however estimated that at the present time, three fourths of the arable lands are uncultivated, and that, if the whole were under proper cultivation, five times the quantity of corn *now* grown could be produced.

This subject, so vitally affecting the salubrity and material prosperity of the Island, deserves and is receiving the utmost attention and consideration on the part of the Government, and it will be specially and more fully referred to in the concluding Chapter of this volume, when discussing the various projects for the future amelioration of the country.

CHAPTER VII.

Forests — Extent — History — Oak — Ilex — Cork — Poplar — Birch — Ash — Walnut — Chestnut — Maple — Bark — Charcoal — Cork — Ashes — Guardie Forestali — Government Supervision — Forest-laws — Rain-fall — Suggestions.

* The Forests in Sardinia, once the pride and glory of the "Island, are fast disappearing, " — so writes the "Historian," in Murray's Continental Guide, — and, as the information in that useful book is, on most points and in the main, wonderfully accurate, and de-servedly relied upon, it becomes the more necessary to direct attention, when a wrong impression is created, and the more so, when that impression has become generally prevalent. It will doubtless be gratifying to the author to know, that his information as to the past is unfounded, and that his prophetic lamentations as to the future are not likely to be realised.

There can however be no doubt, that, in ancient times, the Sarde forests were far more extensive, than they are in the present day; but so also were the forests of Great Britain, and of every other known country, where a considerable portion of the surface was originally covered with trees.

Where *now* are the grand old forests of Sherwood and Charnwood, and the "chases," of Cannock and Cranbourne, and many others of classic

or historic fame, of which scarcely the slightest vestiges exist at the present time? and have we not had to pass the most stringent laws, for the preservation of the few remaining mutilated strips of woodland, that are still left to us?

In America, are they not already complaining of the rapid destruction of their forests, and expressing the gravest apprehensions, that in a few years there will be a scarcity of wood, even for their own purposes, and have they not recently passed laws to encourage the re-planting of trees in several of the western of states now entirely disafforested? and are not Canada and Norway, whence we get the main supplies of timber, for our collieries and other works, each year finding it more and more difficult to keep up the supply?

No doubt the forests of Sardinia have been hardly and roughly used; large tracts have been wantonly fired by the shepherds for pasturage, and fine trees, especially cork, ruthlessly destroyed for the sake of their bark and ashes, when, by judicious cultivation, they might have produced periodical supplies for centuries to come, and yet have been barbarously sacrificed for the sake of the one crop immediately obtainable. Still the forests of Sardinia contain many millions of magnificent and valuable trees; and, considering the comparative size and population of the island, it would be no exaggeration to say, that Sardinia *now* can boast of possessing a greater area of forest, covered with more available timber, than any other civilized country in the world.

In the south of the Island the woods are isolated, but some of them are of large extent, and in the west, there are also several extensive tracts of land still in forest; but what may now be called "par excellence," the "forests," i. e. continuons tracts of woodland, stretching far beyond where the eye can reach, and covering hundreds of square miles, are situate in the centre and northern parts of the Island, in remote districts, and at a distance from either sea or railway. The Genargentu has one of the most extensive continuons tract of forest, and is the centre of the highest range of mountains, and there trees grow and thrive at an elevation of over 4000

feet above the sea; and, though not so large in bulk or height, as those at a lower elevation, are yet vigorous and healthy, and do not appear to suffer from either climate or exposure.

It is calculated, from official sources, that in the northern district, there are not less than 12 million forest and timber trees i. e. trees of full size, fit for the axe; and in the centre district 32 millions of such trees; and that in the west and south there are 21 millions making a total of over 65,000,000 trees. This number is independent of fruit-trees, cultivated and wild, the numbers of which are stated to exceed another 50 millions.

The principal, and most common, of the forest trees are the oak, ilex, cork, and wild olive.

There are several varieties of oak, but the “*quercia bianca*,” or “*Rovere*,” as it is called in Sardinia, is the most common, and *was* the most valuable. It attains to a great size, trees containing 300 cubic feet of timber being not unusual, and “logs,” of great length depth and width are easily obtainable. The bark is not however in demand for tanning, and its bole and branches are not convertible into ashes or charcoal of marketable quality; unless therefore the trees are in easily accessible places, and within reasonable distance of either rail or sea, (and few forests are so situated) they will not return a remunerative price, and are therefore not worth felling. It is a sad reflection that this “King of trees,” instead of standing, as it has from time immemorial, at the head of the most honoured denizens of the forest, is now fallen almost to the lowest order in point of value and importance, and has to yield to the ilex, the cork, and other trees of less grandeur and pretensions, but of more practical utility. The fact of its not “paying,” to fell an oak is however its best safeguard and protection, and, except in some few favoured places, and for local consumption, as railway sleepers or for building purposes, it is allowed to grow neglected, and abandoned as a worthless object; a marked but melancholy instance in nature of the mutability of worldly affairs.

The decline in the value of oak timber is mainly owing to the

discontinuance of its use for shipbuilding purposes, which, from its closeness of grain, resistance to cleavage, and comparative lightness, it was admirably adapted; steel and iron have however now, from their superiority in both these qualities, and their comparative cheapness, entirely supplanted wood.

The felling of oaks and other trees is generally done by Tuscan or Genoese woodmen, called in the Island "continentals"; they come over in winter, and leave in June. The work is done by contract, and the average price is 15 lire per cubic metre, and a cubic metre is about 36 cubic feet. Freight, portage duty, and landing charges will amount to at least 20 lire on the ton, and, when the carriage from the forest to the rail or sea exceeds 25 lire per ton, which in most of the remaining oak forests is now the case, there is an aggregate cost of over 60 lire per ton, and this, at present price of oak timber, would leave no appreciable profit, after commission freight and other charges have been deducted.

The "Ilex," or ever-green oak, is the most common of all forest trees; the numbers are officially given at over 30 millions. It grows to a great size, both in height and bulk, and from not shedding its leaves in winter, presents a gay and striking appearance, while its colleagues in the forests look sad and gloomy.

The wood of the Ilex is very brittle, and, when cut into planks, warps so freely, as to be almost valueless for building purposes. It has however many valuable properties; its wood makes charcoal of first-rate quality, fetching a high price in the market, (about 60 lire per ton) and the bark, which stands next best to cork for "tanning," purposes, is worth on an average from 120 to 140 lire per ton; the wood is convertible into either charcoal or potash, and, in either of these shapes, it is light and easy of transport; points of the highest importance, where carriage is difficult and costly.

The wood of the ilex is converted into charcoal, by being cut into lengths, 2 feet long by 6 inches broad, and then piled into heaps, about 16 feet high and 20 feet long, and covered with earth

so as to exclude the air; an opening being left at one end, at which the light is applied, and the pile is then allowed to smoulder till it dies out. It takes two and a half cubic metres of wood (which is rather more than two tons English) to make a ton of charcoal.

The ilex is stripped of its bark *after* it is felled; the process of peeling the tree, when standing and growing, which is generally done in England in the early spring, when the sap first begins to run, is not practised on the oak or ilex, although it is on the cork; the cost of felling and peeling is about 40 lire per ton, and to this must be added the cost of carriage from the forest to the sea-port, which, of course, depends entirely on the situation and distance, and varies from 5 to 30 lire per ton; at the last named sum however there would remain a substantial, though moderate, margin of profit.

A good-sized ilex will yield about a ton of bark and 2 tons of charcoal.

In many forests, growing and inter-mixed with the ilex and other trees, is a large shrub, called "Filledea"; it has often five or six distinct shoots, all growing from the same root, but never attaining any great height or thickness. They grow so close together, that they form an almost impenetrable forest, impossible to pass through, except where paths have been made. Their wood makes the very best charcoal, and commands the highest price in the market, and the cost of conversion is rather less than that of the ilex. It is a very fast growing tree, and, after being cut, is ready again for the axe in about 10 years.

The ilex in this respect has the same property, and, after being felled, it will in the same period present a similar appearance and growth as the Filledea, and have several shoots from the same root or stem. During the first three years of growth it is necessary to keep cattle sheep and goats from grazing in those parts of the forest, where the felling has taken place; but this is seldom or never effectually done.

It is estimated that there are over 1 million full-grown serviceable

trees of the " Sughero " or cork tree, nearly the whole of which are in the northern forests, and, though it never attains any great height or size, it is the most valuable *commercially* of all trees in the island, and requires, as it deserves, the utmost protection and attention. Unlike other trees, when stripped of its bark, instead of languishing and dying, a process of recuperation at once sets in, and in few years it is ready again to yield its full produce; and this process can be repeated for an indefinite length of time. It is one of the most slow-growing, but longest-lived of trees; it yields its first crop, when from 30 to 40 years old, but it is not considered to have arrived at full maturity until it has reached the respectable age of one hundred years.

The cork-tree has two distinct kinds of bark. The outer cuticle, when the tree is in its virgin state, is valueless for manufacturing into corks, by reason of its roughness, owing to long exposure to atmospheric influences; and yet it is light and buoyant, and is used by fishermen for floating their nets, and is also used for the roofing of shepherds houses, and is made into pails, stools, and other domestic utensils. For any of these purposes however it fetches but a very poor price.

The system of preparing, or, as it is termed, " cultivating " the cork crop is very simple. The outer bark, which, if the tree be very old, (as they always are in virgin forests) is about 6 inches thick, is first stripped from the tree with a large kuife, and in doing this, great care must be taken not to cause injury to the inner bark. After this stripping, the inner bark then becomes the outer bark, and another inner bark begins at once to be formed, which in 5 or 6 years will have grown to sufficient thickness and maturity to keep the tree in full vitality; the outer bark, which by that time has attained a thickness of from one and a half to two inches, may then be taken from the tree without danger to its future growth and vigour; and the inner bark, which during this time has attained a thickness of one quarter of an inch, thereupon becomes the outer bark, and the process of recuperation again sets in, and in another

five years the tree is ready again stripping, and this may be repeated for generations. The branches as well as the trunk are peeled, but this is not done till two years after the bole has been barked in order to keep the vitality of the tree unimpaired. The cost of stripping off the bark (the tree of course standing, and growing during the operation) is very nearly the same as for the ilex.

In former times, when forests were let on lease to speculators, and up to a recent period, a very different system of dealing with cork trees was resorted to, and it is adopted now, where the lease of a forest is unexpired, or where the owner is a needy man, or in want of immediate cash.

The tree was first felled and stripped of its outer bark, which was sold for what it would fetch which was very little. The inner cuticle was then taken off, and, though not valuable as cork, it was *most valuable* as bark for tanning purposes, and fetched from 175 to 250 lire per ton; the wood of the tree was then converted into ashes, by boring a bole near the bottom, and setting fire to it, and allowing it to burn till the whole tree became a heap of ashes, which as potash commanded a high price in the market. An average tree would produce from all these sources about 40 lire nett; — but, when this was done, there was nothing left; “the goose that lay the golden egg,” was killed.

It is calculated that each cultivated cork tree will yield on an average, every 5 or 6 years, about 70 lb. of cork, and a ton of cork will produce from 45,000 to 50,000 corks of the usual wine-bottle size; in the rough it is worth about £. 30, per ton, and there is therefore a very a large margin of profit to the manufacturer; but this, like many other profits, is lost to the Sardes, though they might, with little trouble and cost, carry on the manufacture themselves.

The cork tree, it is said, will flourish for hundreds of centuries.

The other ordinary forest trees are almost valueless commercially, neither bark, charcoal, nor ashes, being producible from them; and for the wood there is only a small local demand, which is easily supplied. The poplar, and beech are used for making

carts, planks, wheels, and ploughs; ash is the best wood for shafts; while the walnut, maple, and chesnut are bought by the joiners and cabinet makers; but the aggregate demand is very limited. The surface of the ground beneath the trees is in most forests generally covered with scrub and underwood, consisting principally of *arbutus*, *cistus*, *erica* etc., some of which attain a height of 20 feet with a diameter of 12 inches; but they have no market value, and when they can be safely set fire to, without damage to the trees, they are burnt for the sake of improving the pasturage.

It is however an undoubted fact that, even in comparatively recent years, much injury to the forests has taken place, which is irreparable, and deeply to be regretted. This has arisen, partly from the apathy of the Government and the Communes, to whom the greater portion of the forests jointly belonged, and the loose, and indeed almost reckless mode, in which the rights of felling timber were leased to dealers — who of course only looked to the main chance, viz, making the most they could in the present, regardless of the future — and partly also, from the fact that under joint ownership, involving divided responsibility, the supervision was of the forests was imperfect, and the administration of the law ineffective. Now however all this is changed, the joint ownership has been severed, Government and the Communes have each their own separate allotted portions and individual responsibility.

Those belonging to the Communes must, within a short period, be divided and apportioned, and each proprietor have his own separate property; the Government portions are already under direct Government supervision, and special "Guardie Forestali," have been appointed. Stringent laws too against trespass and burning have been passed, and the Government forest guards, as also the Carabinieri quartered in each district, have strict orders to see the laws carried out.

Powers also have been given to private forest-owners to appoint "guardie forestali," who wear a special uniform very similar to that of the government guards, and carry, when on duty the same arms, viz. sword, pistol and carbine, and they are clothed too with an

authority, equal to that of the *carabinieri*, to enforce the laws; these powers, as also their duties, are large and varied.

Their duties are to see that no illicit burning or wilful trespass of men or cattle takes place, and they can not only arrest any person transgressing any of the forest laws, or who is found in the forest and cannot give a satisfactory account of himself, but they can take forcible possession of any gun, knife, or other weapon, he may have upon him; in the event of arrest, the offender is taken before the " *Pretore*," of the district, who adjudicates on the case at once and inflicts fine or imprisonment, according to the gravity of the offence. They have also power to impound any strange cattle, that may be found in the forest, for the release of which a heavy fine is leviable before the owner can recover them, and, if not redeemed within a few days, they can be sold by auction for payment of the fines and to defray the expenses of impounding and selling.

In case of apprehended disturbances, or if in pursuit of criminals who are at large, the *carabineers* and guards are bound to assist each other, and this they do most zealously, acting in concert together.

As a class, the guards are a fine and intelligent body of men, well-disciplined, well-armed, well-mounted, and fearless in the discharge of their duties, which are both arduous and dangerous. They have to be out at all hours and seasons, often all night in the snow, fog, wind, and rain, with nothing but their military cloaks for protection against the weather, on the look-out for depredations which they suspect are about to be committed, or to capture some old offender, who is eveding the executive. There are several of these offenders still at large in some of the more extensive forests; they live a miserable hunted life, screened by the shepherds, and deriving a scanty and precarious subsistence from their friends in the adjoining villages, whom they visit in secret during the night. They however never attack travellers, nor even intrude themselves as importunate beggars, whose demands it would not be prudent

to refuse or ignore; indeed their object is to keep on sight as much as possible.

An additional protection too is afforded by the fact, that as the forests become divided and sold, (a process going on very rapidly), they are inclosed with stone walls and subdivided, and these operations further prevent trespass, as well as arrest the progress of fire, whether arising by accident or design. Indeed, every precaution is now being taken, to stop further waste and destruction, and to bring the forests under systematic control and regular management.

In the future, however, more even than in the past, much will depend upon the private owner, but, as his interest will be all in favour of protecting the forests, and making the most of them permanently, there ought not be a doubt as to their being dealt with generally — if not universally — in a very different manner than they have been. Private owners, moreover, are not left altogether to their own arbitrary will, for by the laws recently passed, unlimited felling of trees in any forest is prohibited under heavy penalties, and the preservation of "clumps," or "belts," of defined extent, and at specified elevations, for the sake of shelter from the winds, as well as for attraction of rain, is made penally obligatory, and this latter object is of infinitely more importance than might at first appear.

The intimate relationship between trees and rainfall is almost incredible to those who have not studied the subject, and when it is considered how all-essential is rain to the health and prosperity of Sardinia, the preservation of the remaining forests is not only a point of the first importance, but the re-planting of portions of some of the denuded forests, is almost equally imperative.

The Government fully realises this by the protective and restrictive laws they have passed, and by distributing gratuitously young trees for planting, and offering other inducements as encouragement.

The destruction of the forests, and the indiscriminate felling of trees has had two-fold bad results.

The growing trees, though their leaves and branches, attract the passing clouds by drawing to them the watery vapours they contain;

the rain descends, and having penetrated the soil under the shade, and into the roots, of the trees, evaporation and absorption take place more slowly, and the moisture is retained in the ground much longer, and is given off more gradually, than from a bare surface of land, exposed to the heat of the sun and other atmospheric influences; moreover, as the forests grow principally on sloping ground, and on the sides of precipitous mountains, when the trees are felled, the soil is gradually washed down into the valleys and low grounds, and the bare rocks which form the substratum are thus exposed, and being unable to retain the moisture, the waters pour down into the valley in streams as they fall; and these again add to the injury by increasing the volume of the rivers beyond their natural flow, and consequently flooding the adjoining low-lands.

This strong affinity between trees and rain is no theoretical dogma, but an admitted fact and has had practical confirmation in many places of late years; a few illustrations will suffice.

When the Suez Canal was made, its banks were planted with pine trees; and, as these increased in size, the rainfall in the district also increased, and what was formerly a dry arid plain is now a comparatively fertile district. In the Island of Java, on the other hand, not many years ago the plantations were all felled to extend the cultivation of tobacco; the opposite effect however was the result, and owing to the decline in the rainfall it was almost impossible to raise the plants. Replanting was at once resorted to, and is already having a sensible effect on the growth.

Still more pointed illustrations are however afforded by the two islands of Malta and St Helena. On the former, which was formerly well-wooded, all the trees were cut down, and the rainfall in the Island so decreased that it was almost impossible to raise crops, where formerly they grew and flourished. St Helena, in the time of Napoleon's residence, had no trees and no rainfall, and was completely barren; about 40 years ago it was planted with pines and other trees, and now the rain descends in sufficient quan-

-tities to insure excellent crops and grain of fruit, and the character of the latter island is as much changed in fertility for the better, as Malta has been for the worse.

Such generally is the present position of the forests of Sardinia, and the uses to which they are put, and the treatment to which they are subjected; and it will be observed, that though much has been done to stop the reckless and wanton destruction that had been going on for generations, yet that nothing, or very little, is being done towards the improvement of existing forests, and the restoration of those that have been destroyed. Steps in both directions are essential if the forests are to be preserved, and the rainfall, so vital to the health and fertility of the island, is to be regained.

As regards existing forests, where the woodman's axe has never been heard, as also in those, where a partial felling has taken place, a great proportion of the oaks are either dead or dying. Often have I stopped, when riding through almost interminable glades of woodland, with trees of the finest timber on all sides of me, far as the eye could reach, to admire the magnificent panorama of continuous forests *apparently* in full life and vigour, but alas a nearer inspection and practical experience disclosed the sad conviction that disease had already begun. The bare brown topmost shoots and branches proclaimed the unmistakeable sign of incipient decay, and told the melancholy tale, that in a few short years, most of them would be stretched alongside their dead brethren, who had already succumbed to the same fate, and were lying stark and blanched at their feet. It was a solemn sight, producing serious reflections, but, fortunately, not without a remedy, which, though severe, is the only alternative, and that is, putting a merciful end to a miserable existence already dying by inches from a disease, for which there is no cure viz, old age. This would be a practical application of the old Sarde custom of "accabatura," to the worn-out inhabitants of the forest.

The felling of these diseased trees, which are deteriorating every year in value, would, no doubt, create great gaps in the forests; but these gaps would soon be filled by young oaks springing up

spontaneously from the acorns of their ancestors; and companions might be given to them, wherever there were space and suitable soil, by planting, near and around them, pines and larches, which, being of quicker growth and earlier maturity, would not only shelter and protect the young oaks during their infancy, but, when no longer needed, could be felled and sold at remunerative prices.

As regards the lands totally denuded of trees, the greater part of which is totally unfit for cultivation, and affords but indifferent pasturage, owing to the thinness and poverty of the soil, a similar principle should be applied, viz, the planting of acorns, pines, and larches, which would grow up together, the latter acting as nurses for the oaks, which would become the permanent crop.

With regard to the cork trees; those that are so ancient, as to be no longer productive (of which however there are very few), should at once be felled, and young trees planted in their places; the old trees being turned to profit by conversion into bark and potash. The ilex and filledæa will reproduce themselves, if protected from cattle during the earlier years of their growth; and for this purpose, as well as for better utilisation generally, the forests should be subdivided by walls, so as to admit of the younger trees being protected, while other divisions of the forest are pastured.

It is matter of extreme regret that these measures towards preservation and recuperation, simple and inexpensive as they are, and seeing their vast importance upon the general welfare of the island, have not received earlier attention from the Government, and that private owners have not, in their own interests adopted either these or some other remedial steps. The Government seems however now to be thoroughly impressed with the importance of the subject, and a sense of its duties and responsibilities, and it is to be hoped that private owners will take the same view, and follow in the same course. So far very few proprietors have done anything in this direction; the only exception almost to this sweeping charge, is an English proprietor, who has purchased large tracts of lands and forest in the island, and who, in the management of his property, has set a whole-

some example, by shewing what *can* and *ought* to be accomplished. It is to this gentleman too that the Sardes are mainly, if not altogether, indebted for their railways, and it is gratifying to be able to place on record some meed of praise in his honour, and to wish him every success in the enterprises he is undertaking. Like all pioneers and benefactors in every age and country, much that he has done and is doing is looked upon with jealousy and mistrust; these feelings are however gradually disappearing, and when it is "brought home" to the Sarde mind, that the changes effected are not only in themselves improvements, but are yielding a handsome return on the capital invested, the example will doubtless be followed by the more enlightened proprietors who can afford it, and his merits will then be duly appreciated. This gentleman does not reside in the island, but, with his family, visits it periodically; in his absence he is ably represented by his resident agents, who enter heartily into all his schemes for improvement, and carry them out "con amore." They are always willing, and indeed pleased, to shew and explain what has been done to all visitors whether strangers or natives. It should also be mentioned that there are attached to his estates at Macomer, and to his forests of Bolotona and Laconi, extensive nurseries for young trees, for the filling up the vacant spaces in the forest, and for the planting of new forests, where the ground is suitable. Every variety of tree that it is thought might grow in the Sardinian climate, is being cultivated on a large scale, but some years must necessarily elapse before the results can be practically demonstrated. Up to the present time, the young trees, that are thriving best in the nurseries, are the *pinus maritima* and the larch, and if they continue to flourish as they have done, they will form a most valuable addition to the forest-culture of the Island; and, as they are fast growing trees, the wood will soon be available for housebuilding, scaffolding, telegraph poles, and railway sleepers, for which it is specially suited.

CHAPTER VIII.

Mines — Mining Laws — System of working — Lead and Silver — Manganese-Zinc — Copper — Iron — Coal and Lignite — Nickel — Marble — Granite — Clay — Porphyry — Agates — Sardonyx — Cornelian — Amethyst — Roman workings — Present condition — Future prospects.

Sardinia, from the earliest period of its history, has been noted for the richness, extent, and variety of its minerals, and though there is no detailed, or positive account in ancient records of their working, there is sufficient evidence to shew that they were well known, and had been worked during the period of the Phœnician colonization, nearly 3000 years ago. The silver and copper coins of Phœnician make attest conclusively to this; and the lamps and vases found in some of the old mines are strong proof of their having been worked by the Carthaginians. The Latin names of several of the mining towns such as Feraria, Plantea and Argentaria afford presumptive evidence of their having been in existence during the Roman possession, and there is additional proof of the fact, not only from the ruins of old smelting works, evidently of Roman construction, but from the writings of several historians, who mention the payment of tribute "in silver," by the Sardes, and one Roman writer — Solinus Poliphestus — specially speaks of "argentiferous ore."

From the Roman times, and during successive Governments of the island till the 13th Century, no specific mention is made of mi-

-ning, but when the Pisans and Genoese were in possession, frequent historical allusions are made to "payments of silver", and it is historically recorded, that the Genoese on one occasion (A. D. 1283) captured from the Pisans an "enormous quantity of silver", with which it, is said, that they "built their dockyards," and at another period in A. D. 1303 the Pisan army is reported as "returning to " their country loaded with silver".

In A. D. 1865 there was found at Iglesias, the Capital of the mining district, a valuable work containing the Sarde mining Code that had been in force during the time of the Pisans, and which had been approved of by Alfonso of Arragon A.D. 1337.

The terms of this code are most liberal, and it may be interesting to mention some of the main provisions. It enacts that any person, who *thought* he had found minerals any where, might explore, and if a trace was discovered, the spot was to be marked with a cross, which was not to be nearer to any other similar cross, than 25 paces, and the contemplated works were not to penetrate into adjoining works; if the works were abandoned for a fixed time, any other person might become the proprietor, but for three months, this was not to deprive either the first explorer, or the proprietor of the soil, of his rights.

This code too greatly advanced the miner's social status, by declaring that, after he had worked 5 years at the mines, he had the right to be made a magistrate, whose functions were amongst other duties to see to the safety and proper working of mines.

The royalty payable to Government was fixed by the same code at $\frac{1}{12}$ th of the gross produce of the mines; but the crown gradually acquired an exclusive right to all mines; and it is on record that, in A.D. 1472, nearly the whole of the mines in the Iglesias district had been granted to a Company who also had the privilege of smelting and refining all the minerals of the Island.

During the Spanish regime, mining was neglected, but the Crown claimed the ownership of the mines, and in A.D. 1557 leased them all in bulk to a Florentine speculator; but he made

nothing out of them. It appears that the kings of Spain during their dominion, granted altogether 40 concessions, most of which included *all* the mines in the Island. Considering however that the Spaniards had the mineral riches of the "new World", in their possession, their indifference to Sardinian mining is not perhaps much to be wondered at.

When Sardinia came under the Savoy dynasty, mining attracted more attention, and in 1741 the whole of the mines were let to a rich Company for the term of 30 years. Quartz veins were then for the first time worked, and powder was first used for blasting; it was during this period that the large rich vein known as "Monte vecchio", was first discovered, and it is reported, that this vein alone repaid all the expenditure, that had been incurred by the Company. The mine is still in active operation, and is at the present time the richest in the island.

In spite, however, of this fortunate discovery, mining generally continued in a languishing state for nearly a hundred years during the European troubles, and towards the end of the 18th century it altogether collapsed; and it was not till the year 1832 that any attempt at revival was made. A new code of mining laws was then published, with the view of encouraging the industry; it was published at Cagliari in 1834, and amongst its 31 articles (all more or less restrictive) there were clauses rendering it compulsory to carry on the working under the direction of a government engineer, whose approval was also necessary to all plans for erecting smelting works, or other buildings; the produce of the mines could not be sold without the permission of the Intendant General; a daily journal of the working of the mines had to be kept, and exhibited once a month at the Intendants office; and a series of other vexations and arbitrary provisions was imposed, under which few persons were found willing to embark their capital, or risk their labours. Perhaps the best practical proof of the restrictive effect of this Code was afforded by the fact, that the total value of "exports", of metals from the Island at that period (as shewn by official returns) was only £. 5878 per

year while at the present time they reach nearly £. 200,000. This very unsatisfactory state of affairs, it was evident, could not endure long, and indeed a more enlightened policy was very soon adopted.

In 1840 the Code of 1834, with all its obnoxious regulations, was repealed, and the mining laws in force on the Continent were substituted in their place. These laws were framed with the view of encouraging mining, and all their provisions have that tendency; fresh laws were passed in 1859 after the annexation of Lombardy to Piedmont, but they simply confirmed the laws of 1840, which are now practically in force, and all mining operations at the present time are regulated by them. These laws for the first time made distinctions between the different sorts of minerals, declaring that mines of stone, marble, marl, clay, and others substances, which may be considered as superficial, were the property of the owner of the soil, but that all metalliferous substances, wherever found, were the property of the State, and could not be worked even by the owners of the soil, without government permission.

This permission was however made obtainable by any person who applied for it, on his declaring that there were indications of metalliferous deposits; and the Prefect, upon the refusal of the owner of the soil to allow the exploration, had power to grant the permission upon payment of land-surface damages to the owner. The license had force for a year, and if, during that time, the expected minerals were found — and the government engineer so reported — the explorer had to define the exact limits, and extent of his proposed operations, (which were not to exceed an area of 400 hectares) and then after certain publications, and, if there were no opposition, the required concession was granted to the explorer by the Council of mines and the State. The concession is a perpetual grant, but liable to forfeiture, if the mines remain un-worked for two years in succession. The royalty payable to government was as first only 3 per cent upon the value of the produce, but the law of 1859 increased the royalty to 5 per cent, and imposed in addition an annual payment of 50 centimes, by way of rent, for every hectare

of superficial area included in the grant. This law also gave certain powers of inspection, and of insuring the safe working of the mines, and the health of the miners, but it in no other way affected the law of 1840, and altogether it was as liberal in its provisions, and as little restrictive in any of its conditions, as the most enterprising or captious miner could desire. There are 500 of these permissions now running, but they are mostly of a speculative character; very few will ever arrive at the age of concession, and still fewer reach the more advanced stage, of development, or actual working.

The concessions now existing do not exceed one hundred in number, and of these a very small proportion are worked to the extent they ought to be, and a still smaller number are worked to a profit, or indeed without actual loss.

In speaking of the geological formation of the Country, it was mentioned that the mineral veins were generally found at the junction between the schist and calcareous formations. These veins or seams are of two kinds, the continuous or "true fissure" vein, which runs with the stratification, and the isolated mineral ores found in "pockets", and filling all the holes and crevices which have been left by the various upheavings and movements of the earth's body.

The former are the most to be depended upon as a permanent source of supply, but the latter, though more uncertain and speculative, are often the richest and most productive.

Very little English capital is embarked in mining enterprises in Sardinia. At the present time there are only three such companies, and their united capital is not very large. One of them (the most important) is also possessed of extensive forests, and pays 5 per cent to its shareholders; of the other two no reliable information was obtainable.

The total number of persons employed on all the mines, in the underground workings and on the surface, exceeds 20,000, of which rather over half are "miners", i. e. underground workers, and earn on an average from 3 to 6 lire per day; and the "surface" men earn

about half as much. The former class, until a few years ago, were mostly "continentals", from the mining districts of Italy, but now by far the greater proportion are Sardes, and each year this proportion is increasing.

At most mines work is carried on during the whole year. Formerly working was discontinued during the summer months, owing, it was *said*, to the fear of malaria, but *really* owing to the "continentals", making it an excuse for returning to their homes for three or four months, to enable them to reap their own harvest, and rejoin their families. Now, however, that the Sardes are gradually filling their places, this condition of things is being altered, and work at the principal mines is continued uninterruptedly throughout the whole year.

The Sardinian mines may be divided into 8 groups or classes viz. Silver-lead, Iron, Copper, Manganese, Zinc, Coal or Lignite, Antimony, and Nickel.

Lead and silver (the two ores are always found together, and are called argentiferous lead,) are the most valuable mines, and the most extensive; the greater number are near Iglesias, but they are found also in other parts of the island. Of these mines the richest and most important are those of Monte Vecchio and Monteponi; and both are in the Iglesias district.

Monte Vecchio is situate, about 20 kilometres West of S. Gavino a station on the main line of railway, and has a private branch line to the mines about 9 miles in length, worked by locomotives, and carrying passengers and goods, as well as minerals.

The superficial area of this mine embraces 3 concessions of 400 hectares each, equal to about 3000 acres. There are several workable veins or seams running through the area lengthways, and varying from a few inches to 12 feet in thickness, and in richness of lead averaging from 80 to 85 per cent of lead, and from 70 to 140 grammes of silver per ton.

These mines were first worked early in the 17th Century, and have passed through many vicissitudes of good and bad times in the

interval, but since 1865 they have had an almost uninterrupted period of prosperity, and are now being worked with the greatest activity. The operations are on a grand scale ; there are several pits or shafts, with powerful steam engines for drawing up the ore, pumping out the water, and ventilating the workings. The galleries of exploration and working extend to an aggregate length of over 10 kilometres; all well-laid with iron or steel rails, on which the ore wagons are propelled, either by ponies or small locomotives, for transporting the mineral to the " Cribbles ". These machines, which are really large riddles, are worked by steam, and by the continuous injection of streams of water, the ore is kept in motion, and the metal is thus separated from the earthy substances mixed with it ; the ore is then washed, and after being picked over by hand and piled into heaps, is in saleable condition.

The annual " output " varies between 4000 and 5000 tons, and, the ore (silver and lead together) sells at present prices for about £. 12 per ton. There are about 2000 work-people, above and below, regularly employed, and of these fully five-sixths are men, and the rest women and children. They are well cared for, having comfortable houses at moderate rents, medical attendance and hospital, and a sick club, to which both masters and men contribute ; and, the mines being situate at an elevation of nearly 1000 feet above the campagna, the climate is healthy, and the mines are worked continuously throughout the year.

Monte Poni is the next most ancient mine, and the next also in importance. It is situate about 2 miles from the town of Iglesias, and though the ores are not so rich in silver and lead as Monte Vecchio, yet the mines themselves are more extensive, and have the advantage of producing calamine of zinc, as well as argentiferous lead.

This mine was in the hands Government, and worked by State officials until 1875, when it was sold to a Genoese Company for one and or half million lire, and since then it has been largely developed. Its superficial area is very large, larger than Monte Vecchio, and when it was sold to the Company it had nearly 60 kilometres in

length of under-ground roads (of which 15 were laid with rails and sleepers) and a large number of shafts, most of them worked by powerful engines. Some of the shafts were over 1000 feet deep, and so great was the volume of water at this depth, that it was found impossible to keep the mines dry by pumping, and in 1882 a tunnel, about 6 kilometres in length, was commenced so as to take the water from the lowest levels by gravitation; this tunnel will, it is expected, be completed in another twelve months. The total cost of the work is estimated at 3 million lire, but it will render workable, or "un-water," nearly 100,000 tons of ore, which, at a moderate computation, will be worth over 20 million lire, and this will not only amply repay the outlay, but the saving in the cost of pumping will be enormous, and the profits on the general working of the mines will be proportionately increased.

The argentiferous ore varies greatly in quality, and is separated into three classes, containing respectively 80, 60, and 20, per cent, of lead; the proportion of silver in each quality is small, not exceeding 25 grammes.

The treatment of the ore is by mechanical riddles, and it is sold in its raw state, as at Monte Vecchio. The output last year was rather over 14,000 tons.

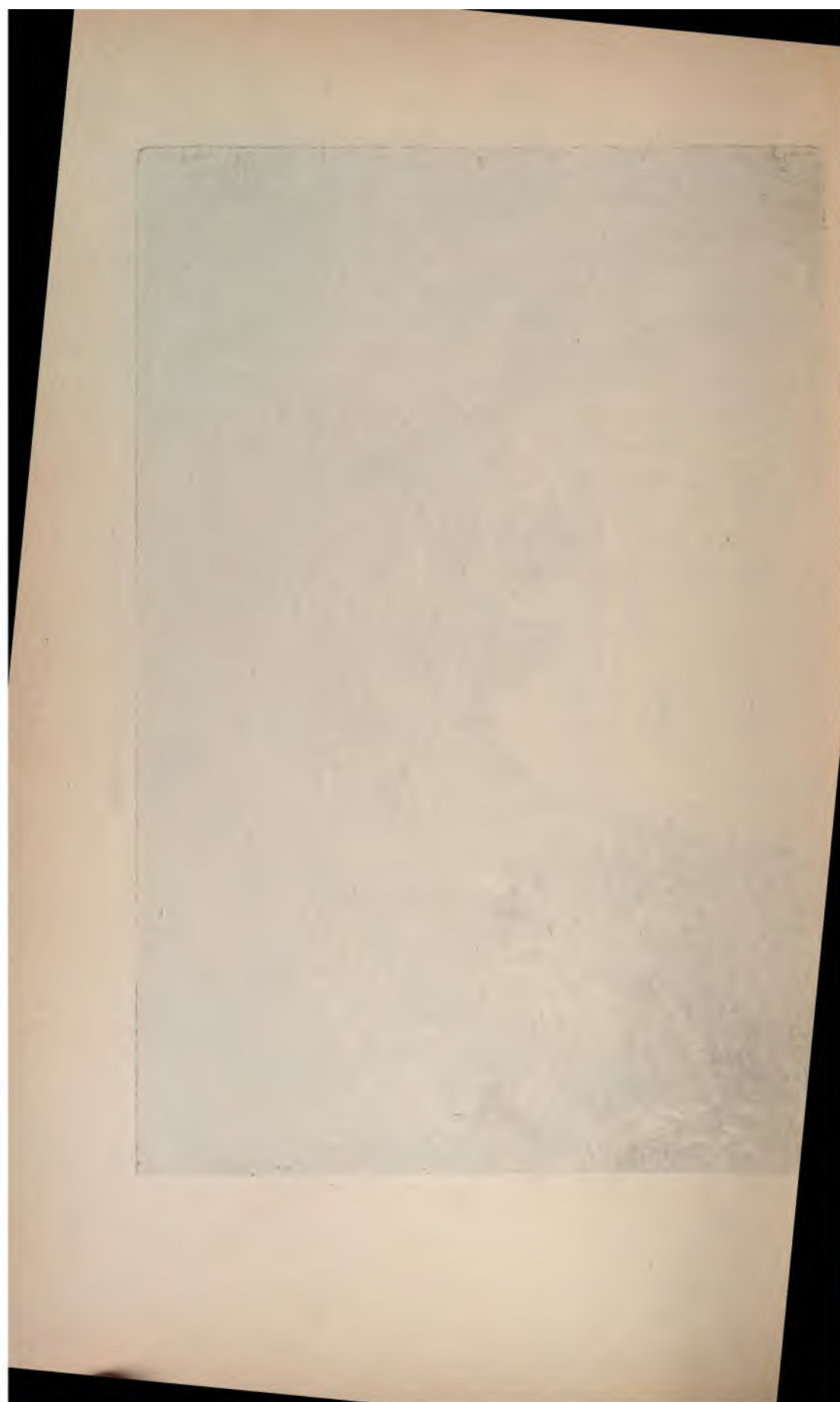
The vein or seam of calamine "crops out," about 450 feet from the top of the mountain, which is here about 1500 feet above the sea; in some places the width of the seam is over 100 feet, and the ore, when calcined, contains about 50 per cent of metallic zinc; the out-put last year was close upon 10,000 tons.

The cost of getting and preparing for market a ton of lead ore is about 10 lire, and of calamine (including calcining) about 45 lire; to these must be added the cost of carriage to the seaport in the Gulf of Palmas, to which the Company has a private railway, about 21 kilometres in length. At present prices the argentiferous ore leaves no appreciable profit, but the calamine of zinc is fairly remunerative.

The number of persons employed in and about these mines is



Masua and the Mediterranean.



over 3000, and the monthly wages and expenses average L. 5000 sterling. There are houses for the men, hospitals, medical attendance, sick clubs, and other advantages, as at Monte Vecchio, and the management generally is economical and efficient.

There are about 30 other mines of lead, silver, and zinc, in the Island, but none of them so extensive or important as Monte Vecchio or Monte Poni; all are similar in character, but the greater number of them produce only a few hundred tons of ore during the year, and it would occupy too much space, and answer no useful purpose to describe them in detail. There is, however, one mine, situate at Masua about 20 kilometres from Iglesias, which has a smelting furnace, a shipping port, and some other specialities which are interesting.

This mine is most picturesquely situate on the side of high precipitous mountains, overlooking the Port of Masua, on the Western coast of the Island, from which it is distant about $1\frac{1}{2}$ miles.

The ores comprise lead silver and calamine, found in the same or contiguous seams, and worked together; the relative thickness of each varies greatly; as a rule, the more the zinc, the less the lead and silver, and *vice versa*, but the average may be taken at about 33 per cent of lead, 47 grammes of silver, and 45 per cent of zinc, per ton,

All the ores are passed through "Cribbles", and any lead ore, which does not average more than 30 per cent of lead, is smelted in the furnaces at the mines (it would not pay the cost of transport and would otherwise be valueless); the higher qualities of ore are sold direct from the heaps, after passing through the cribbles.

The calamine is calcined before it is sold, and averages from 45 to 50 per cent of metallic zinc.

Iron. — A few years ago there were 6 mines opened, and at work, but none of them of any great extent or importance, except the mine at San Leone, which ceased working nearly 2 years ago.

San Leone is situate about 10 kilometres to the north of the Gulf of Cagliari, and has a private railway from the mines to the

Port; the superficial area of the concession is about 1000 acres. The ore was quarried from the surface, the veins being of great thickness, and of an average quality of 54 per cent of metallic iron. All the arrangements were on the most approved modern plans for extensive working, and with inclined planes to bring the ore to the railway wagons, and capable of transporting 150,000 tons a year; the average output, however, during the 5 years of its working, was only 14,000 tons, and never exceeded 20,000 tons in any one year.

Copper — There is not now, and has not been since 1872, any copper mine in operation; and the product of the largest mines of those formerly in operation did not exceed 100 tons a year. There have been several attempts since made to open other mines; but, though samples of rich ore were often found, yet the veins were so uncertain and unreliable, that no actual working of any of them has ever been carried on.

Manganese. — This mineral has not hitherto been extensively worked in the island, and the only mine, of which there is any official return at present, is "Capo Reggo", which is situate on the coast, about 9 miles from the Port of Carloforte. The ores are of fair average quality, and are used either in the making of steel, or for chemical purposes, according to their quality. They are shipped to Marseilles; the price is about 25 lire per ton, and the yearly output is about 8000 tons.

There are several other mines of manganese, now in course of being opened out, and favourable reports are given of many of them; they are, however, not yet sufficiently developed to form any definite opinion upon them, and there are no official reports of their working or output.

Nickel. — Only one mine called "Perdo de Fagas", has been worked, though many have been discovered, and permission to work granted. This mine is in the Iglesias district, and the ore was very rich, containing 25 per cent of nickel. During the 4 years it was worked, about 90 tons were got, which realised, *it is said*, £. 70 per ton. The mine was, however, abandoned several years ago, for

reasons not made public, but most probably because it was either exhausted, or could not be worked to a profit.

Antimony. — There were two mines of this mineral at work, but only that of "La Sangins", in the Lanusei district, now survives; its last official production is put down at 180 tons, and valued at £. 10 per ton; and the ore contained 55 per cent of antimony.

Coal. — or rather Lignite — is found in several parts of the island, but the largest area in extent, and the best in quality, is situated near Gonessa in the Iglesias district, where there is one "basin", which is estimated to comprize 30 square miles. The thickness of the seam, which lies almost horizontal, varies from 6 to 8 feet, and is worked by means of shafts and galleries, on the old "pillar and stall" system, as formerly practised almost universally in England.

The first mine of which there is any official record, "Terra di Colla", was opened in 1854, but, after a languishing existence of 20 years, it expired in 1875, having produced altogether about 400 tons. Another mine called "Fontenasso", was opened in 1860 and its produce last year was about 1000 tons. A third mine called "Bagu abbis", in the same district, was opened in 1862, and is now in moderately active operation; the last official return shews an output of over 11,000 tons, with an average selling price at the pit of about 10 lire per ton; but at this price it will scarcely repay the cost of production. The price of South Wales or Durham coal is nearly treble this sum at the Ports of Cagliari, and Carlo Forte, but, notwithstanding this great difference, it is preferred as the more *economical* fuel at the mines where both are used.

It is said that in the north of the island, near "Seni", coal of an anthracite character has been found, from 6 to 8 feet in thickness, of good quality, and with only a few traces of sulphur. Some experiments have been made with this coal, with the result, that every unit of carbon vaporised 4.5 units of water, but that, to get complete combustion, it was necessary to have a strong draught, and a large superficies of furnace grating. In the interest of Sardinia it is most desirable that these experiments should be

continued on a larger scale, as they no doubt will be; but before the coal could be utilized to any great extent, it would be essential to place the coal-fields in direct communication with the railways, and this would necessitate the making of new lines of considerable length for the special purpose.

Marble and Granite of good quality and of various colours, white, red, gray and variegated, are found in many parts of the Island, and might be most extensively quarried and profitably worked, but to accomplish this, and especially for quarrying in large blocks (in which form it is the most valuable) good roads, communicating directly with the railways, are essential; this will be to a great extent effected when the proposed new lines are constructed, and a great export trade might then be established. Meanwhile the consumption is limited to the local demand for ornamental building purposes, which is inconsiderable.

Alabaster of fine quality has also been found in several districts, near Cagliari, Lanusei and Laconi, and in some of the "grottoes," but it has not been developed as an article of commerce; and whether it would "pay," to work has yet to be seen; while however there are so many other minerals and industries undeveloped, offering more certain profits, it is not likely to receive much attention.

Porphyries of different sorts have been discovered, and are held in high estimation.

Among the primary Calcareous formations are also some sacca-roidal marbles of beautiful grain, and marble of green and black colour; and in the secondary limestone formation black marble has been occasionally met with.

Jasper abounds in the Trachyte and Dolomite, and amongst the Calchedones are to be found Agates and Cornelian, Sardonyx and Amethyst, also the Hydrophane called "La Pietra trasmezzano," from its peculiar property of becoming transparent, when immersed in water. Turquoise and Garnets are found, but not frequently, as also alabaster and gypsum.

Of clays there is a great variety, used for glazing as well as

in the manufacture of common pottery, which is carried on in many parts of the Island.

At Domus Novas, and several other places in the Island, a large and profitable trade was for many years carried on by smelting the scoria or refuse workings of mines and furnaces, that had been worked in former times. The total quantity so worked is said to have exceeded 120,000 tons and to have yielded 18,000 tons of lead, besides silver. This scoria is now exhausted, and the trade is of course at an end, but it was very profitable while it lasted, and affords additional evidence as to the extent to which in ancient times mining operations were carried on in the Island, as also of the imperfect manner in which the ore was treated, and the metal extracted.

It is historically recorded that, during the later period of the Roman occupation of the Island, the Emperors, Valentinian, Valens, and Gratianus, issued stringent edicts prohibiting mining experts visiting Sardinia, "lest," so ran the exact wording of the decrees, "they should become too affluent, or lest the superiority of the mines should cause the mines in other Roman provinces to be neglected."

Such a prohibition seems in the abstract strange at any period, and in these times sounds peculiarly absurd and sarcastic, to those interested in Sardinian mining at the present day; seeing how few mines there are which can be worked to yield any profit at all, and how very many there are, which are being carried on at an absolute loss, and, one after the other, are being abandoned.

The languishing condition of this second most important industry of the Island, (agriculture must come first), forming, as it does, the most expansive item of export, and bringing more money into the country, than all the other items of export put together, deserves the most serious consideration; and the causes that have led to its depression, or are preventing its extension, require the fullest examination.

The great fall in the price of metals, and especially of lead (which is the most extensively worked mineral) is, no doubt, one

of the main causes of the present stagnation. The decline in value has been very nearly 50 %, and when it is remembered, that out of the remaining 50 % all wages, and working and administrative expenses, have to be paid, it will be seen, that, even if the profit formerly had been 100 % there would be no margin left *now*; but, as the profits from the best mines, in the best times, never exceeded 50 % a reduction in cost of production, in order to make "both ends meet," becomes an absolute essential to "carrying on," in the future. It is however only in the large mines, that there is scope for the exercise of substantial economy; and it necessitates the stoppage of all "dead," or "unprofitable," work, and of all "explorations," (the continuance of which operations is essential to the proper working of all mines), and can only be resorted to as a temporary expedient, which will have to be "overtaken," and form the first expenditure, on the arrival of better times, and before any division of future profits can properly be made.

It is well known, amongst the mining circles in Sardinia, that the mines, which are at present making any profit at all, could be counted on the fingers, and though many others continue to struggle on, yet it is at a loss to the mine-owners, and in the hope of better times. Much, indeed everything, will depend on the turn of the metal market; if the value of lead, owing to the large and increased supplies from America, Spain and other countries, were to remain permanently at its present low price, with no increased consumption or demand, the prospects of lead-mining in Sardinia would be gloomy indeed; but a more hopeful view is taken by those best qualified to form an opinion, and in a short time, the resumption of active operations in the mines still working, and the re-opening of many others that are now closed, are looked forward to with confidence at no distant date.

Lead, however, is not the only metal that has declined in price, though it has had the most serious fall. Iron, copper, manganese, zinc, and almost all other metallic substances, have, more or less, fallen in value. Calamine has experienced the least depression, and

some of the best mines, those producing calamine as well as argen-tiferous lead, have been enabled to "carry on," and owe their salvation, to this mineral.

There are, however, many other causes of depression, besides decline in prices, some in themselves slight, but making up a serious aggregate, and sufficient to turn the scale, when it is nearly on the balance; and it is the "last straw that breaks the camel's back."

Of these causes the greatest is many, in indeed most instances insufficiency of capital for developing the mines properly, and working them economically; the consequence of which is, that in some mines the workings never reach the depth or direction where the "vein," in its fullness and richness is, according to scientific knowledge, most likely to be found; and in other mines, where they have reached the vein, the "eye," or "plum," is alone extracted, for the sake of immediate gain, irrespective and regardless of the irreparable damage which is being done to the future and permanent working of the mine.

Another, and equally serious, drawback is the great distance at which many mines are situate from the Railway or Sea-board, and in some cases even from Provincial or Communal roads. Several of the richest known mines may be said to be almost inaccessible, the cost of transport by horses or in bullock-wagons, first to the public road, then to the railway, and then to the Port, with the expense of loading and unloading, and shipping and export dues, swallow up the greater part of the value of the ore, leaving insufficient even for wages and other expenses.

This evil will, to a great extent, be remedied, when the railway extensions, now in contemplation, are completed, for they will penetrate into many districts, where these mines are situate; and, when the line of railway is within "measurable distance," either tramways, direct from the mines to the railway, or wagon roads, communicating with existing roads, will be constructed, and this alone will, in a great number of cases, decide the opening and working of many rich mines, that are now closed, unopened, or unexplored.

Another serious drawback is the want of smelting furnaces; there

are at present in the whole island only three mines where lead ore is smelted and made into "pig", and these furnaces are comparatively small, not capable of smelting one half the production of the mines to which they are attached; and there are no furnaces for the smelting of iron or other minerals. The ores therefore have to be sold and shipped in their raw or crude state, and the purchasers, who are either smelters or commission agents, in arriving at the price (which is founded on the market price of metal for the day) take good care to be on safe side in their deductions for the cost of conversion, so as to leave a "fair" margin of profit for themselves *under any circumstances*. Taking argentiferous lead ore, the mineral most commonly sold in the Island as an example, the following deductions are made, and generally allowed.

1st 9 % as the loss on fusion of the lead, the actual loss being on an average not more than 5 %.

2nd 4 % as the loss on silver, upon which there is really no loss at all.

3rd 60 lire as the cost of fusion or smelting, the actual cost being not more than 40 or at the most 45 lire per ton.

4th The freight by sea from the port, where the ores are put on board, to the site of the smelting works on the Continent, with insurance and other expenses are together *generally* aggregated at about 4 lire per ton *over* the actual cost.

These deductions and payments added together constitute a formidable total, and make all the difference between a "living" profit and a substantial loss; and all of these, as well as the saving in freight by shipping the *metal* direct to the consumer, instead of the *ore* to the smelter, might be secured to the mine-owners by smelting their own minerals, either at their own mines where practicable, or where that is not within their individual reach or power, by combining together and erecting works for common use at Cagliari or some other convenient port of shipment, where fuel and labour are easily and cheaply obtainable.

CHAPTER IX.

Trades — Industries — and Manufactures — Salt — Wine — Oil — Flour — Cheese — Butter — Honey — Soap — Potash — Alkali — Soda — Pottery — Tanning — Lime-burning — Brick making — Gunpowder — Lucifer matches — Beer and Aerated waters — Handicraft-trades — Labour.

The trades, manufactures, and other industries, if we except those specially connected with agriculture forests and mining, which have been referred to already, are few and insignificant, and limited almost exclusively to the domestic requirements of the Island. Those most important in extent, and which give employment to the greatest number of operatives, and form the main articles of export are (excepting minerals charcoal and bark) the manufactures of salt, wine and oil.

The manufacture of salt is not strictly a Government monopoly, but Government owns the works and reservoirs at Cagliari and Carlo-Forte, where *alone* it is manufactured and which are the only establishments of the kind in the Island. The process is very simple and inexpensive viz evaporation by the atmosphere of sea-water; at Cagliari it is pumped into reservoirs, which are very extensive, and cover a superficial area of over five hundred acres; they are situated at a slight elevation above the level of the sea, with which they are connected by a canal. The salt water is pumped

into the reservoirs by steam-power, and let out at pleasure through a canal, by means of which also the salt is transported by boats, direct from the reservoirs, to the sides of the export vessels.

The establishment at Cagliari, from its position, and the warmth and dryness of the climate, is admirably adapted for the production of salt by this process. The best season for evaporation is from June to October, and during this period about one thousand workmen are constantly employed; but during the rest of the year a regular staff of forty men is sufficient.

The workmen are convicts from the Prison of San Bartolomeo, which is situated close to the works, and they are distinguished by a costume, consisting of a white cloth coat and trousers, with a red cap. The average yearly manufacture is about 150,000 tons, the whole of which, except the comparatively small quantity consumed in the Island, is exported; about two thirds being taken to the Italian mainland, and the remaining third sold, and exported direct, to the north of Europe, Africa, and the East. The cost of producing a ton of salt does not exceed one shilling and three pence, and the waste in the process of making and storage is about twenty per cent; the selling price *at the works*, for Sardinian consumption, is three shillings; the export price is much higher — more than double. —

The works at Carloforte are carried on in the same manner as at Cagliari, but the annual production does not exceed 10,000 tons.

It is interesting to note that malarious fevers are unknown amongst the work-people employed at the salt works, and it is supposed that the salt acts in some way as an antidote.

The conversion of wood into charcoal has been described, when speaking of the forests, and it needs only to be added, that it forms one of the most important manufactures in the Island, and is not only largely need for home consumption, but is exported in enormous quantities.

The cultivation of the vine is rapidly extending, especially in the south of the Island, and is fully described in the chapter on

the agriculture; it remains only to be mentioned that the wines are exported wholesale " in the rough, " to Marseilles, Cettes, and Bordeaux where they are mixed and manufactured for market — a most profitable industry, now altogether lost to the Island, but which might and *ought* to be prosecuted with great success.

Oil. The culture of the olive is next in importance to the vine, and is being extended with equal rapidity.

The olive tree grows wild in the forests, and is also largely cultivated in gardens and orchards, the latter of course yielding the greater average produce. The fruit is plucked in the winter, and is then crushed or squeezed by hydraulic or other pressure, and the liquid, after it has settled, is drawn off into barrels, and shipped either to Genoa or Marseilles, where it is purified and prepared for the English and other foreign markets. The Sardes use the oil for eating and culinary purposes in its raw state, and declare it is infinitely superior to refined oil, as well as more *pure* than after it has been *purified*; and it certainly does in its crude state taste *more* of oil, if that be a test of superiority; crude oil sells from thirty to thirty five shillings per barrel of 7 $\frac{1}{2}$ gallons, which leaves a fair margin to the producer, but the great profit is made in the refining, and this with little cost or trouble might be reaped by the Sardes. The refuse from the crushing is called " Sanso " which, after being chemically treated with bi-sulphide of carbon, makes a second class oil, and is used for illuminating and lubricating purposes.

The export of oil within the last fifteen years has increased more than tenfold in quantity and value, and is each year rapidly expanding.

Cheese — has also been referred in the remarks on agriculture. Its manufacture is now exclusively confined to the farms where the milk is produced, there being no general cheese manufactory in the Island. It is however a very large industry, and is increasing, the present exportations being largely in excess of preceding years.

Flour — is made in the Island and the whole production is consumed there, none being exported; and wheat, though it *might* and *ought* to figure largely in the returns, is insignificant in amount.

Six years ago every household had its own mill for grinding its own corn; now every town has a steam-grinding mill, which supplies the surrounding district with flour, and very soon the household grindstone and its ass will be things of the past.

There are bakers not only in every town, but in every large and small village, and they supply also the isolated farms and houses; the loaves being either forwarded by the postman, or sent for by the consumer. The bread is of two sorts, white and brown; both are well-made, good, and cheap; the 2 lbs loaf selling for two pence. Muffins and tea-cakes are unknown, but dinner-buns, and a curious variety of fancy pastry designed no doubt primarily to meet the juvenile taste, are made and exposed for sale by the bakers; but, as I never dared to venture upon a nearer acquaintance, I am not able to express any opinion on their merits.

Tanneries are few in number, and this is the more singular as they evidently "carry on," a good business, and are prosperous concerns; nor is this latter fact to be wondered at, seeing that all the main ingredients, used in the manufacture of leather, are produced in the Island; ilex and cork trees providing bark of the best quality, and the skins of cows, sheep, and kids, being purchaseable direct from the producer at wholesale prices. Indeed every thing would seem to combine to render this particular trade especially suitable and lucrative; and yet skins and bark to the value of many millions of lire are annually exported; and leather to the amount of more than half that value is brought back into the Island every year. It is almost incredible that so large a profit should be allowed each year to be lost, and that wages to so great an amount, as would be expended in this manufacture, should not be put into the pockets of the Sardes, rather than of foreigners.

Soap is rather extensively manufactured, though the importations are considerable, and there are no exports. It is made with

carbonate of soda, and the process is the same as in other countries.

Gunpowder is also made, but on a very limited scale; indeed there is only one small manufactory, worked by water power, and situate in the mining district of Iglesias, where most of the gunpowder is used. This industry might with advantage be profitably extended, as charcoal and salpetre are native productions, and sulphur is easily and cheaply obtainable from the neighbouring Island of Sicily.

The manufacture of tobacco was carried on in the Island till a few years ago — first at Cagliari and afterwards at Sassari also — but the raw produce is now taken to the mainland, and manufactured at the Royal works there; it is then brought back, generally mixed with other “growths”, to the Island in a manufactured state. Every precaution is taken against native or illicit manufacture, but it is nevertheless carried on to a large extent; probably not less than one third of the whole consumption in the Island is so made. A licence for the sale of tobacco is necessary; it is generally granted to some retired soldier or civil official; the price is fixed by Government, and the seller receives 10 per cent as his profit. Ordinary cigars can be purchased at two shillings and twopence per 100, and the best tobacco at three shillings and sixpence per lb; the ordinary common tobacco, smoked by the Sardes, is sold at about one shilling and twopence per lb.

A singular and very exceptional trade is carried on at Aritzo, at the foot of the Geunargentu range of mountains, where the snow lies all the year round on the northern slopes of the range.

The snow is carried on poneys from the mountains, and from those places where the horse cannot “get a footing”, it is brought down on the backs of men to where the poneys are; the labour fatigue and difficulty are very great, and there is *of course* a “Festa”, held in honor of the Patron Saint of the trade, called “Madonna delle Nevi”, which is held in high estimation.

This industry, like tobacco and salt, is a royal monopoly and

is leased every six years. This snow, for certain purposes, is better than ice, which is imported from Norway and which can be bought at the reasonable price of 10^s per kilo, equal to $\frac{1}{2}$ ^d per lb. I was unable to ascertain the rent now paid for the privilege of this trade, but amongst the Cagliari archives are some old leases, one from Philip IV in 1633, in which the rent is stated at a sum equal to £. 100 sterling — a large sum in those days — but it is said to be much higher now. The snow is transported from the foot of the mountain on the backs of horses to the neighbouring towns, and that, destined for Cagliari, Sassari, and other distant places, is carried to the nearest railway station, about forty miles off, and is thence transmitted in railway wagons to its destination.

Lime-burning and brick and tile making are carried on in various parts of the Island, but not in sufficient quantities to supply the various local demands. Bricks are generally dried by the sun, but some are burnt in kilns, when charcoal or fascines are used as fuel. Coal is used in the burning of lime and tiles.

There are no carriage builders in Sardinia, but in all towns there are wheel-wrights shops, where carriages can be repaired, and where carts, strong and rough but suitable to the country, are constructed. There are also in several of the large towns foundries for making small castings; and workshops, where oil-presses and pumps are made and repaired, but no steam engine has ever yet been constructed in the Island.

The making of pottery ware — rough crude articles, but of classic shape — is carried on at Nuradda, Oristano, Decimo, Assenini, and some other places where suitable clays are found. The manufacture however is on a very limited scale, and not sufficient to meet the requirements of the Island; and not only pottery ware, but bricks and tiles for building, are imported in great quantities from Naples Genoa and Marseilles.

The cultivation of "Honey", might be carried on to an almost unlimited extent, and be made a profitable industry. The local

consumption in the Island itself is very large, and it should form an important item of export.

At present, in many districts, much of the honey consumed is * wild , i. e. obtained from natural hives, which are generally found in the trunks of trees; in other districts it is cultivated artificially. The artificial hives are cylindrical in shape, about ten inches in diameter, and twenty inches in height, and are made of rough cork, which is the best preventive against the attacks of the moth, centipede, and other injurious insects. Rough cork may be obtained at very small cost, and making the hives involves very little trouble; but, through ignorance or apathy, there is no substantial increase in the number, though wild thyme, heath, cistus, apiastrina, and wild parsley are abundant in nearly all the rural districts, and honey might be produced at no appreciable cost. The honey in Sardinia is of two kinds, the sweet and the bitter, the former has a delicious flavour, and is said to be equal to the Hybla and Hymettus of classic fame. It requires rather an acquired taste to appreciate the bitter quality, and the cause of the bitterness has never been clearly accounted for, but, as it is produced in the autumn, it is supposed to be derived from some flowers or plants that do not bloom till late.

Virgil alludes to the berries of the yew as being injurious to bees, and, in Xenophon's *Anabasis*, a story is told of the Greeks eating honey from * bees fed on the yew , and being * very ill , afterwards, as if * made drunk. , Horace too, in his * *Ars Poetica* , condemns in strong terms a dish made of * *Sarde bitter honey* , mixed with * roasted white poppy seed , but as the latter ingredient was the much more likely of the two to create nausea, perhaps the poetic satirist might have expressed a different opinion, had he tasted only the honey. At all events, it is highly appreciated by Epicures of the present generation, the bitterness being somewhat similar to that of the scotch marmalade, and giving the requisite counteracting flavour to the luscious sweetness of the honey. This honey finds a ready sale in Rome, Leghorn, and Naples.

It is calculated that each hive will produce on an average 3 lbs

of honey, and $1\frac{1}{2}$ lbs of wax; upon a very low calculation these together would sell for two shillings and sixpence, and as it is stated that, in the Gallura district alone, there are now upwards of 150,000 hives, the present annual produce must be worth nearly £. 20,000 sterling in value. The possession of 200 hives — and this is about the number that one person can look after — would bring in £. 25 a year, which in itself would form an income in Sardinia, much larger than is enjoyed by many labourers and small farmers. Moreover this industry might be carried on in conjunction with other occupations.

The Bee-eater (*Merotis*) abounds in Sardinia, and the mode of catching them is very ingenious, though somewhat tinged with cruelty. Bees, having their bodies pierced with small pins attached to skeins of silk, are let loose, and during their flight they are pounced upon and swallowed by the *Meropes*; and, when the silk becomes entangled in the shrubs and boughs of trees, the bird, being unable either to disgorge his prey or fly away, is easily caught. These *Meropes* again in their turn, from their dainty feeding, are excellent eating, and, when served with vine leaves and toast for the "trail", are esteemed a great delicacy.

The *Meropes* generally build their nests in the banks of rivulets, and though rather smaller than, they are not unlike, the kingfisher both in plumage and flight.

The cultivation of silk is carried on in a few houses in some of the larger villages, but to a very limited extent. The mulberry tree grows luxuriantly in a wild state, and this industry might be largely and profitably extended. Silk forms an insignificant item in Sardinian exports, but in the Italian customs it stands almost highest in the list.

There are of course all the usual handicraft trades, makers of hats and caps, boots and shoes, and clothes and hosiery of all kinds, joiners, carpenters and cabinet-makers, black-smiths and tin-smiths, plumbers, glaziers, and others which are generally to be met with in all cities and towns; and tailors and shoe-makers are to be found

in every village, large or small. All carry on their trades in an antiquated quiet fashion, (the only labour-saving machines in the Island are some sewing machines, and these were not in use but in the shops for sale), but the work is good, and the charges moderate, and the people are satisfied.

In some of the villages, particularly in the north of the Island the manufacture of coarse woollen goods, comprising coverlets, carpeting, towels, saddle-bags, sacks and a variety of other rough useful articles, is carried on by hand-loom in the houses of the peasantry, and the surplus produce, beyond what the villagers themselves require, is taken by "Viadanti," or commercial travellers to adjoining towns and villages, and there sold at very moderate prices. The goods though coarse, are very serviceable, and wear well. They must however be very different articles from those manufactured in the Roman times, when Varro, according to Marcellus, amongst other luxuries of the period "was accustomed every day to repose on Sardinian carpets"; Varro would have had a "rough," time of it, sleeping on the hard knotty carpets of the present day. No attempt has ever been made to spin or weave by machinery, and yet wool is largely exported, and woollen goods almost as largely imported. The establishment of small-sized mills, in some of the large towns, could not fail to yield a handsome return, as well as afford employment to hundreds of women and children, who now have few industrial occupations suitable to their sex or age.

The making of ropes is carried on in some districts from a broad grass which grows wild, and baskets are made from the same material as well as from willows.

Beer soda-water and lemonade are also manufactured in the Island in a primitive fashion; the latter are extensively made, the consumption being large; for making the former there are two small places at Cagliari and Sassari, which are scarcely worthy of the name of breweries. The beer has a hard rough bitter taste, and is dark in colour; and as a bottle of good sound wine can be purchased

at half the price of a glass of beer its consumption is limited, and not likely to increase.

The making of lucifer matches is carried on at Sassari, and sufficient are manufactured for home consumption. The card-board for the boxes, with Sarde costumes delineated on both sides in the gaudiest colours, are and made in Turin, and imported.

At Cagliari is a manufactory worked by steam power for knitting the Sarde cap (Beretta), and the fez, which is exported in large quantities to Tunis.

Alkali is also made in the Island, from a grass, which grows on the sea shore, and which, after being cut and dried, is burnt in heaps; the ashes are then dissolved in water and recrystallized, and constitute alkali.

Sulphate of zinc is also manufactured; it is made from calamine which, after calcination, is treated with sulphuric acid.

The Coral fishery is a large and profitable industry, but is principally carried on by Neapolitans and Genoese. The number of vessels engaged in it, in the middle of the last Century, numbered between four and five hundred, but there are at present only two hundred and seventy vessels in the trade, and they pay a duty to the Government for license to fish. The fishermen arrive about the middle of March, and leave in October, so as to reach home in time for a special Saints Day in November, which they regard with peculiar devotion. Each vessel has a complement of from eight to twelve men; the chief fisherman is called "Popiere", and his pay is from £. 30 to £. 40, for the seven months of the season; the other men receive about £. 4 each in addition to their food — which however is not costly — consisting of bread, olives, and water, with occasional wine. They work for ten days at a time, till a fresh supply of provisions is needed, — or until a Saints day calls them ashore. The "Popiere" has to keep strict watch over the men; they will smuggle a piece of coral, whenever they possibly can, concealing it about their person, and even taking it away in their mouths.

The price of coral depends on the quality. The first size or quality has been sold for as much as £. 20 for 2 lbs, but the average price is about two shillings and four pence per oz. It is on record that 794 tons were once "got," in a single season, about eighty years ago, but the average money value of the aggregate fisheries is now estimated at about £. 60,000 a year.

The Sardinian coral is superior to that found on the Sicilian coast, and the Neapolitan fishermen come in consequence to the Sarde shores. The usual fishing ground is from ten to twenty miles off the shore, where the average depth of the sea is about three hundred feet.

Amongst the marine productions of the Island is the "flat-tatura," a crustaceous fish, very like a large mussel, measuring from two to three feet in length. It is torn off the rock with iron hooks, and is then broken in order to extract a bunch of silk which it contains, and which is called "lanestrino." This silk, when cleansed of all impurities, is dried in the sun, the roots are cut off, and it is straightened with combs and carded, by which processes the quantity from each shell is reduced to about three ounces of fine thread. It is knit into stockings, gloves, caps, etc. and is of a beautiful yellow brown color, resembling burnished gold. It readily sells for about eight shillings per lb; and four ounces will make a pair of gloves, which are sold at three shillings per pair.

Sea fishing is not prosecuted to any great extent; the Sardes do not, as a rule, care to trust themselves in the open sea; they prefer limiting their fishing operations to the stagni or lagunes, or within a short distance of the shore. At Cagliari, Boso, Oristano, and other seaport towns, there are a few small fishing smacks, but they never venture out far from the coast, and their principal takes are lobsters and crabs, (which are caught in basket traps, not unlike those in use on the British coasts) and cockles and mussels; some of the latter measuring two feet and a half long, and six inches broad. The consumption of sea fish is very large in Sardinia, as in all other Roman Catholic countries, and the markets are mainly supplied from

the stagni or salt water lakes. There are several of them on each coast, the two principal stagni in size and production being at Cagliari and Oristano. The former called Caligiantano is about six miles long and four broad, and is the property of the Crown. The latter, called "Cabras", forms a chain of lakes, and in 1652 was sold by the Spanish Crown to the Duke of Pasqua for 600,000 lire; it was then let for 60,000 lire a year.

The fish are admitted into the stagni at each tide through canals opening into the sea, and, when the gates are closed, a large net is drawn along the lagune, which varies from three to five feet in depth, and men, mostly naked, with a small net round their waists, and a short bludgeon in their hands, first despatch all the fish which rise to the surface, and then "duck", down for those that remain at the bottom. It is said that altogether 400 men are employed at the Cagliari fishing, and that the annual produce is about 600 tons of fish. At Oristano, the number of men employed is less, but the produce is said to be greater. The several varieties of fish are almost incredible, between forty and fifty different sorts, the names of which, being in the Sarde language, it is impossible either to understand, or to transcribe. Most of them are coarse, both in appearance and taste, but some few are delicate and well flavored. The best, however, are the well-known grey and red mullet and eels, all of which are caught in great abundance.

The Sardine and Anchovy fisheries — the best of which are on the west coast between Alghero and the Island of Saint Antioco, — have greatly deteriorated during late years, but this is not owing to any decrease in the number of fish frequenting the coast, but to the want of energy in prosecuting the trade. The "takes", are enormous, and it will scarcely be credited that there is not in any part of Sardinia any "curing", shed, or any establishment for the preparation for market of these favorite and most highly prized fish. The fish as soon as caught are forwarded to Leghorn Genoa Marseilles and other Italian and French towns, where they are manipulated for the foreign market. The manufacturers must realize large profits, as

the well-known Sardine box, which sells for a shilling retail, cannot have cost a penny. There is nothing magical or difficult in the preparation of these delicious articles of food, and this industry affords one of the most glaring instances of neglect on the part of the Sardes to secure a most lucrative trade; for everything, excepting tin for making boxes, is more easily and cheaply obtainable in the Island than on the mainland, and very little of either skill or capital is needed. Moreover sardines, prepared in the Island where they are caught, would, we may fairly conclude, command a readier sale in the market as the "genuine," article — "Sardines from Sardinia," — than those manufactured at places which have to import their productions, and may not after all be the "real thing."

The "Tunny," fishery (Tonnare) forms an exception to the general rule, and is extensively carried on; it is one of the most valuable and important industries in the Island, though the Sardes derive scarcely any benefit whatever from it.

The date of its first institution is uncertain, but in the 16th Century it was recognized by the Arragon Government, and special advantages were offered to those who embarked in it. At the close of the 18th Century, there were eighteen of these fisheries in operation; now they are reduced to three in number.

The fish enter the Mediterranean from the West about the end of April, following the line of Coast into the Black sea, and then, returning the same way back to the Atlantic, disappear until the following April, when the same migration begins again. According to Aristotle, Pliny, and other writers, they proceed to the Black sea for the purpose of spawning, but this is not strictly correct as their eggs are also found in the Mediterranean. Many other causes for this tour are conjectured, but no satisfactory reason can be assigned, except the natural instinct of the animals themselves.

The "tunny," was a favorite fish at the feasts of the Carthaginians and Greeks, and, on account of its fecundity, it was sac-

-rificed to Neptune, to whom prayers were offered against mishaps in their capture.

The ancient mode of catching them, was, as described by Cetti, nearly the same as that adopted at the present day. The net (Madruga) is an immense mass of cordage, weighing about 40 tons, and costing about £ 2000; it is made from the sparte plant, a species of rush, growing on the coast of Valencia, the cords being $\frac{3}{4}$ of an inch thick, and the mesh about six inches square. It is prepared in March, and laid down in April, and everything is ready for use by the 3rd of May, on which day a great festival is held. The priest confers his blessing with great pomp and ceremony, accompanied by the prayers of the fishermen. The net, which has seven chambers, is of great length, and in the shape of a T; it is attached to the shore by another net, extending several thousand feet into the open sea till it joins the net with the chambers; the object being to drive or coax the fish into the last chamber, which has a net at the bottom of it which can be drawn up at pleasure. The whole apparatus is kept in position by anchors upwards of one hundred in number, and is kept afloat by huge pieces of the outer bark of the cork tree. The depth of water in the chambers is about one hundred and twenty feet, but the nets are one third deeper, so as to admit of their "play and sway," according to wind and current.

The whole arrangements are under the order of the "Rais," or commander, on whose skill and experience the success of the operation mainly depends. He has unlimited authority and exacts the most implicit obedience, and has ten or twelve barges, manned by about 150 men, in readiness to assist at the capture, and take the fish, when caught, to land. To induce or drive the tunny into the last chamber several devices are resorted to; a white sail is lowered and when the fish are hovering in the chambers, doubtful whether to proceed or return, an expert diver, dressed in white, swims through the passage, and the "tunny" follow, thinking the object to be one of themselves. Sometimes a large net is lowered, and a few handfuls of sand are thrown down, at which the fish are

greatly alarmed, " as if „ (says an ancient writer on the subject) " the heavens were falling on their backs and crushing them. „ When the fish have passed through several chambers into the last, which is called " Camera della morte, „ it is closed, and the process of hauling up the bottom of it commences, and gradually the whole of the contents of the last chamber (which is surrounded by the barges) is drawn up near the surface; and, as the fish begin to feel their circumscribed position getting more and more contracted every minute, they become panic stricken, and then a scene of slaughter ensues, which baffles description, and would be no more pleasing to read than to witness. It was butchery which reminded me more of the Chicago cattle yards. than any other sight I ever saw. Suffice it to say, that within an hour every fish was killed and placed on the barges, and carried to land, the sea becoming red with blood for some distance round. Ashore another and different scene was being enacted. At the most critical period of the affair, a special religious ceremony was performed, viz, the invocation of the Saints in a sort of Litany, in which all engaged took part; a series of saints was called upon whose names I had never before either heard or read of, but no doubt they were once influential personages in the fishing world; while this was going on, the men began changing their clothes for the slaughter, and the litany was changed at the same time to invoke a different series of saints, and it might have been imagined from the association that these latter saints presided over the old clothes, as the first series supervised the fishing. All this time the " Rais „ was on the watch, and when he gave the sign for action, the chaunting ceased, and the men were all at work in their several departments. The fish were cut open on the shore with hatchets, and cleaned and washed; a hook and cord were then attached, and the fish hauled up on the dry land, where the head and fins were cut off, and gangs of men then carried them into a large open shed. Here the fish were suspended for about two hours, till all the blood drained out, and they were then cut into pieces of from one to one and a half pounds, each having its peculiar value. The flesh is afterwards either salted or

boiled, and, when quite cool, is packed into barrels about the size of a firkin, and in a few hours is under sail for Genoa and other ports of the mainland, where it is boiled again in salt water, and then packed in tin cases with oil ready for the market.

The three tunny fisheries now in operations are. 1st Porto Scuso the property of the heirs of the Duke of Pasqua, who was formerly owner of the Cabras fishery; 2nd Isola Piana, a small island lying North of San Pietro and belonging to the Marquis of Villa-Marina; and 3rd Porto-torres, which is the property of private owners. Isola Piana is the most productive, the yearly take being 12,000 fish, weighing over 1000 tons; and each ton is worth about £ 40. The rent paid for this fishery is said to be £ 11,700 a year, and the rent for Porto Scuso is £ 3700 a year but the produce is proportionately less. The proprietors of the Porto-torres fishery "work" it themselves, and a large establishment for tinning the tunny has been recently opened there in connection with it. It is worked by the Genoese, who come over every year during the fishing season, bringing about two hundred workmen, and all the provisions necessary during their stay. No Sardes are engaged in the trade, and thus another and most profitable industry is entirely lost to the Island.

The markets in Sardinia are held generally in the open streets, the goods being displayed upon stalls, as at our country fairs. The principal article of commerce is grain, and this is brought into the towns either by rail, in carts, or on horses, according to the locality from which it comes. Wheat was sold this year at twenty two shillings per quarter, and barley for about eighteen shillings per quarter. Meat is proportionately cheap; good beef, mutton, and pork sells from 3^d to 4^d 1/2 per lb., and fowls and ducks at 8^d each; cheese from 3^d to 4^d per lb. eggs 3^d a dozen, but butter (which, is not much eaten in Sardinia) is dear, varying from 10^d to 11^d per lb. Fruit and vegetables, of which there is generally a most tempting and profuse display, are also ridiculously cheap according to our ideas; there seems, however, to be no fixed rule as to price; the purchaser

selects the sort and quantity he wishes to have, and then a " lump " sum, seldom exceeding half a lire, is asked for the whole. Potatoes fetch about half the price they are sold at in England.

Sea fish of many varieties, (none of them known in our waters, excepting eels and mullet) is equally cheap, varying from 1^d to 3^d per lb. and trout in the season is equally cheap.

The shops in Cagliari Sassari and other towns, as also in some of the larger villages, are good, and the articles are sold at reasonable prices. A suit of common clothes may be purchased for 25 shillings; a good strong pair of shoes for 5 shillings; a pair boots for 7 shillings; and other things in the same proportion. The jeweller's shops make a great display, and some of the trinkets are quaint and fantastic. The price of course depends on the weight of gold and silver in the articles, and the amount of workmanship, but they are not dear. The Sardes are fond of ornaments, and it is almost the only luxury they indulge in.

Such are the various trades manufactures and industries now carried on in Sardinia, and a very poor and meagre list it must be admitted to be, considering the many natural and valuable productions that the Island possesses, and which might be turned to such profitable account. There are, as we have seen, no mills or mauufactories of any size or importance, and they would not — if the convict labour at the salt works, and those engaged in mines forests and agriculture be excepted — give occupation in the aggregate to more than three or four hundred persons; the various handicraft trades, and fisheries in which Sardes are engaged, altogether probably absorb about as many thousands; and it is estimated that the men employed at the various docks wharves and railways, including carters, would number about 3000. When however all these are added together, and the total deducted from the aggregate town population, there is a large " residuum " left, which no doubt to a great extent will account for the idlers in the streets, squares, and market-places, who are always to be seen in

large numbers, and whose means of subsistence are an unsolved mystery.

A Sarde, it is true, can live on very little; bread, maccaroni, and rice—which are cheap and satisfying—being the staple articles of his food; so that, though the wages of a labourer are low, varying between ten pence and one shilling and eight pence per day, an occasional day's work will provide food for a week, and with this, the ordinary Sarde workman, who is of an easy-going disposition, is quite contented.

Labourers, though engaged by the week or month, are paid by the number of days actually worked, and as there are about eighty whole holidays and twenty half holidays, besides Sundays and occasional special Feste, the number of actual working days in a year is reduced within narrow limits. It is true that work is done on Sunday as on ordinary days, but this practice is gradually falling into disuse, and Sunday is now generally kept in Sardinia, as a day of rest, and with almost as much observance, as in most of our large cities and towns.

The banking accomodation in the Island cannot be denominated as excessive; it is however equal to the present requirements of commerce, and sufficient for private needs. The National bank of Italy (whose head office is in Rome) has branches at the two capitals, and there are several other banks, which are local to the Island. The most important of these are the * Credito Agricolo Industriale Sardo, , which has its head office at Cagliari, and the * Banca Agricola Sarda, , which has its head office at Sassari. Each bank has branches at most of the large towns; the former carrying on its operations mainly in the southern, and the latter in the northern parts of the Island.

In addition to these are some smaller banks, and several private discount houses, but their aggregate operations are very limited, and, with one exception, they scarcely deserve the name of banks; indeed neither externally nor internally do they present any monetary indications. Still lower down in the financial scale are the pawn

shops; these, unlike those on the Italian mainland, (which are Government institutions and admirably managed) are private undertakings, without any official supervision or control, and the poor people grievously suffer from the usurious terms generally exacted.

There are several "trades unions," amongst the operatives of the various industries, such as masons, smiths, bakers, tanners, wine-sellers, commercial travellers etc; all of them are constituted on the basis, as their name "Società di Mutuo Soccorso," implies, of providing support in cases of sickness or accident, and payment in case of death; the subscription is on an average about one shilling per month, and the payments in return are proportionately small. None of these societies have any political signification, nor do they give support in cases of strike or lock-out; indeed the latter are unprecedented, and the only political demagogue, who has figured in the Island within human memory, made few converts during his campaign, and it was cut prematurely short by his sudden and mysterious disappearance, which however created no surprize or sensation at the time, and has never been inquired into since. As regards these societies it is somewhat curious that they find much more favour, and are much more numerous, in the north, than in the south, of the Island, but no explanation of the anomaly can be given.

There are both at Cagliari and Sassari "Camere di Commercio ed Arti," which, in constitution and working, as well as in name, are very like our "Chambers of Commerce." The principal men of business in each province are elected on the Council, which meets once a month, and issues a yearly report. It is an interesting document, in which not only the state of trade for the past year, but various commercial, financial, political, social, and other grievances are fully set forth. It is addressed to His Excellency "Il Relatore," and upon him devolves the duty of reporting the contents to the Minister of Public Works. The complaints and suggestions, however, as a rule, meet with much about the same respect and attention, as the resolutions of our English Chambers, which are seldom or never attended to, unless backed up by influential deputations to

the Minister, who has cognisance of the subject, or, what is still more efficacious, by independent action in the House of Commons.

From the last report it would appear that Sardinia is at present labouring under exceptional depression in its agricultural and mineral industries, which are its two great sources of supply. This state of depression, however, seems to be common to the whole world, and though the Sardinian farmers and mine-owners have not been getting the same prices for their produce as formerly, yet on the other hand they have been paying much less for everything they have had to purchase, and, notwithstanding the depression, the value of the exports for the past year exceeded that of the imports by nearly 10 million lire, which is no inconsiderable balance in favour of the Island, and is a much better comparative return than most other countries can show for the same period.

Moreover the Sardes should not forget, that it is owing to themselves and their own apathy that the balance is not more largely in their favour. They have it in their own power to redress their grievances to a very great extent by the further developement of their resources.

CHAPTER X.

Railways — Origin — Cavour and Depretis — Concession —
Formation of Company — Its history — Contractors — Completion of
main lines — Future extensions — Difference of gauge — Administra-
tion — Permanent way — Traffic — Locomotives — Working expenses
— Government arrangement — General remarks.

The history of the Sardinian Railways is, like the history of Sardinia itself, a chequered and troubled one; and, although not extending over as many years, as the other does over centuries, and not involved in any mystery or uncertainty to shed a halo of romance around it, yet it is somewhat sensational, and is neither un-interesting nor un-instructive.

In the grand scheme for the regeneration of Italy, as planned by the master mind of Cavour, under the auspices and by command of Italy's great King Victor Emmanuel, Sardinia formed no unimportant part of the general programme.

Cavour foresaw that Sardinia, rightly directed and encouraged, had a great future before it, and could regain in the modern world the position which she had occupied in the ancient; when she had more than quadruple her present population, and yet, out of the

wealth of her soil, was able to send forth such an overflow of produce as gained her the title of "the granary of Rome;" and out of her mines were forged the spears which made Rome the mistress of the world.

The first portion of the Sardinian programme was improved communication by a system of Railways — an essential preliminary to its future prosperity — but unfortunately Cavour died before he was able to carry this out, and it was destined, like the great scheme for the political and economical regeneration of the whole Kingdom, to receive its finishing touches from the hand of Depretis. In many respects, and particularly with regard to Sardinia and its railways, Depretis was to Cavour, as Elisha to Elijah; the mantle of the great prophet descended upon him.

It was not however until 1862, when Depretis became minister of public works, that the Sardinian railway scheme was matured, and the first concession signed. It was granted to influential and patriotic Italians, with a small admixture of Englishmen and they undertook to form a Company for making and working a system of Railways, which were to connect the principal towns in the Island. The main-line was to pass from Cagliari by way of Oristano Ozieri and Sassari to Portotorres in the North; a branch from Decimomannu, near Cagliari, to Iglesias, the centre of the mining district of the South; a third was to be a fork from near Ozieri to Terranova or the Gulf of Aranci, which was to be the common port for continental Italy. The Gulf of Aranci is a splendid natural harbour directly facing Rome: thus demonstrating that the "prophetic soul" of Depretis was intent upon what happened eight years later, when the Italian troops entered Rome by the breach at Porta Pia on the 20th September 1870, and the "eternal city" became the Capital of Italy.

In return for the obligations undertaken by the Concessionaires, the Government engaged to give them the freehold of 500,000 acres of lands and forests, and to guarantee a net annual revenue of 9,000 lire per kilometre of railway.

The Concessionaires, however, were met with difficulties at the threshold of their enterprise. The surveys that were produced involved, amongst other costly works, about 20 kilometres of tunnels and upon these plans it was impossible to form a Company or raise the Capital; as financial ruin must have followed any association that had been rash enough to undertake it. New surveys were therefore essential, and the concessionaires invited M.^r Piercy, an English Engineer, who had large experience in similar undertakings, to visit the Island and make amended surveys.

M.^r Piercy consented, and, proceeding to the Island with a large staff of Engineers, thoroughly explored it, and succeeded in discovering routes, which would carry out the programme of the concession, with an aggregate of only 3 kilometres of tunnels, and with lighter works generally.

The difficulties, however, of the Concessionaires still continued, notwithstanding the discovery of easier lines and reduced estimates. Capitalists knew little or nothing of Sardinia, and hesitated to embark in what was to them a "terra incognita, and, it was only by an appeal to the political sentiments of Capitalists in London, who had strong sympathies with Italy in her struggles for freedom and unity, that it became possible to kindle a glimmer of interest in otherwise apathetic circles. The Concessionaires appear to have proceeded with great tact and energy; they succeeded in surrounding themselves with the most noted of English lovers of Italy, and wealthy Italian merchants in London, amongst whom were the well known names of the Marquis Cavour, Count La Marmora, Semenza, Fabricotti, Lefaux, Masini, Comber John Pender M. P., James White M. P., Tho. Barnes M. P., Benjamin Piercy, H. R. Grenfell M. P. (Governor of the Bank of England), Baron Leonino, Marquis Boyd, Sir W. Drake and others.

A prospectus was issued, and a share capital of twenty millions of lire was subscribed, by these gentlemen and their friends. The programme of the Company was to raise the remaining capital by the issue of Bonds on the security of the lands and forests,

which, as appears by the debates in the Italian Parliament at the time, were estimated to be worth 35 millions of lire.

In 1864 the new plans were approved by the Government, and preparations were made for the construction. The contract was let to a Company of great promise, which, under the title of "Smith Knight and Co,," had just been formed for carrying out public works in every part of the world.

With the characteristic energy of a new Company and in a somewhat lavish style, Messers Smith Knight and Co commenced operations, forwarding to Sardinia plant and materials of every description, locomotives, machinery and tools of the most modern construction, and every conceivable species of stores, both for the works, and for the maintenance and comfort of the large staff of engineers and subordinates, who were to have the supervision and direction.

The ground was first broken at Cagliari, but the works were rapidly spread all along the Cagliari-Oristano, Sassari-Portotorres, and Decimo-Iglesias lines, forming together a length of 152 kilometres.

In Sardinia in those days, and until the railway company subsequently broke down the custom, there was what was called the "working season," which began in November and ended in June, when all public works were suspended for the summer months. It had been the intention of the Company to endeavour to complete and open for public traffic the first 152 kilometres in the working season of 1864-5, and the contractors performed prodigies with that object; and had the "workings eason," lasted another six weeks the railway would have been completed from Cagliari to Oristano, a length of 94 kilometres. This, however, was not to be, and it was one of those disappointments which so often change the whole course of events.

When little remained to be done on the arrival of June, in accordance with the prevailing custom, all the Italian workmen left Sardinia for their homes on the Mainland.

While the contractors had been pushing on the works so spiri-

-tedly the Company had been striving by every means in their power to get possession of the 500,000 acres of lands and forests, upon which they were relying as the basis for issuing their Bonds for the further capital required; but in this also they were doomed to disappointment, and in the summer of 1865 it became manifest that it would be impossible to secure possession of the lands within any reasonable time, and the financial arrangements for the completion of the railways consequently broke down.

The extensive properties (of which the 500,000 acres formed part) had devolved to the State, upon the abolition of feudalism in Sardinia, and formerly belonged to the barons, to whose rights the State had succeeded. The rights, however, of the people to pasturage and fire-wood over these lands had not been extinguished or acquired, when the concession for the construction of the railways was made to the Company, nor had the lands ever been surveyed or their boundaries fixed; as a necessary consequence the Company met with difficulties and opposition on all sides, in their endeavours to get possession, and especially from the settlers who had usurped some of the best portions of the lands; and forcible resistance was even made in some cases. The result was that after long continued exertions, the Company, owing to the delay in passing the promised act of Parliament which was to solve the difficulty, only succeeded in obtaining possession of a few insignificant tracts, which were perfectly useless as a security for the issue of Bonds.

In the mean time the share capital had been all expended in caution money to the Government, preliminary expenses, in law suits and struggles to get the lands, and on account of works executed, and rolling stock supplied; and the position of the Company was rendered more difficult by the state of financial affairs in England. The panic in the money market had set in, which culminated on what is familiarly known as "black Friday," when so many of the leading bankers and merchants of London had to close their doors, destined never to be reopened, and when so great a number of English contractors sank, never to rise again. The contractors for the Sardinian railways,

who were also largely engaged in operations beyond the Atlantic, were involved in the general crash, and their affairs placed in the hands of liquidators; this further complicated matters, and the Sardinian railway company in self-defence had to take possession of the plant and stores, but were unable to move further. Under these accumulated misfortunes, which in this case signally verified the old proverb that they "never come singly", the Italian Government, though admitting its inability to carry out the agreement with regard to the lands, were unable for a time to redress the wrong, or remedy the mischief, owing to the distracting strain of the financial and political crisis which Italy was then passing through. The dark cloud, which was gathering over Europe, burst in 1866 in the shape of the Austrian war against the Italo-Prussian alliance, and happily ended in Venice being restored to Italy. The attention of Italian statesmen was however so engrossed by these stirring events, and the pressure of those remarkable times on all Government officials was so great, in providing the sinews of war for the sublime national effort of those days, that the troubles and sacrifices of the Sardinian railway company sank into insignificance beside them.

Negotiations, however, were carried on between the Government and Company with occasional interruptions, and several new conventions were from time to time suggested, and partially entered into, on the basis of the Government retaining the lands and forests, and giving the Company equivalents in money, but nothing conclusive was arrived at.

About this time too the direction of the Company's affairs in London was almost suspended. It had been suggested to the Directors that its business could be more successfully carried on by a committee in Italy, and it was accordingly formed, but without any beneficial result; and it was not until March 1869, when Italy was emerging from the darkest clouds which had overshadowed her struggles, and was entering upon an era of political tranquillity, that a convention was signed, which passed into law in August 1870, the month before the Italian troops entered Rome. This convention

was only a temporary expedient to enable the Company to complete the lines so nearly finished in 1865 viz, Cagliari to Oristano and Iglesias, and Sassari to Portotorres, with the addition of the Sassari-Ozieri line; all of them being the lines of the plains, forming together 197 kilometres, and called in this new convention the " lines of the 1st period; " leaving for eventual settlement the question of the more difficult lines, over and along the mountain ranges from Oristano to Ozieri, and thence to Terranova, together 194 kilometres, and called in the convention the " lines of the 2nd period. "

Under this new convention the Government took back the lands, and in exchange increased the annual guarantee from 9,000 to 12,000 lire per kilometre; and the Company's obligation was limited to the completion of the " lines of the first period " by the end of December 1874; after which the Government was to call upon the Company to decide, whether they would proceed with the construction of the other and more difficult lines, or whether they would renounce the concession altogether, and sell the lines then made to the Government. A provision was also inserted giving the Company a preference for the construction of the other railways under any circumstances.

Thus the Company at last reached a position of some hope. It had only to compass the completion of the " lines of the first period " partly constructed, and then would come the final " tug " of settlement.

The Directors lost no time in taking energetic action on this convention, and Mr Semenza the chief of the original concessionaires proposed to the directors to complete by contract the construction of the 152 kilometres left in 1865 in an unfinished state; his offer was accepted, and early in 1872 they were all opened for public traffic. There then only remained the construction of the Sassari-Ozieri line, about 45 kilometres, to fulfil the Company's obligations under the convention of 1870.

Fresh troubles, however, were still in store for the Company. As may be readily imagined, in the years that had intervened,

the unfinished works left by the first contractors, had been greatly damaged by exposure and floods, the sleepers had been turned into powder and all the valuable materials and stores had become almost worthless; Mr Semenza made a large claim against the Company amounting to £. 100,000 sterling over and above the Contract prices, and this, added to the still unsettled questions with the Liquidators of the old Contractors with whose claims this unexpected demand clashed, again threw the financial position of the Company into disorder, hampered the action of the Directors, and divided their policy. It is obvious that the Company *ought* themselves to have completed the lines left unfinished without the intervention of a Contractor, as the state of the works and materials were in too complicated and uncertain a position for a Contract; and the Directors, it is said, were warned against the course they were taking by their old Engineer, but entered into the Contract under new advice, and did not realize the fatal consequences, until they had come upon them. Fresh difficulties also arose with the Government, when the completed lines came to be worked, upon the interpretation of the working clauses of the convention, about which there were grave misapprehensions, and both sides fell into unaccountable mistakes.

The crowning stone in the arch of Italian unity and independence had however now been placed and had settled down into its position. The impetus given in Cavour's time had "moved," in its course, and the goal had been reached. And as the Sardinian Railway had been planted by Cavour simultaneously with the tree of Italian unity and freedom, had been nursed by Depretis and nourished by sympathising capitalists, and in a sense had become the foster-child of regenerated Italy, sharing in all its youthful vicissitudes, and suffering with it in all its troubles, the Directors had not unreasonably indulged in the hope, that it would be allowed to participate also in its prosperity, and receive its place in the general rehabilitation. In these aspirations, however, sufficient allowance was not made for the prostration that naturally followed the supreme efforts of the Italian

nation. The patient, whose constitution has just triumphed over the "legions" of fever or cholera, cannot always "take up his bed and walk," but is for a time the prey to weakness, often to relapses. It was so with Italy; she had triumphed over the material elements of the earth which had been arrayed against her, but had still to contend against those impalpable mysterious and subtle agencies, which were at work within the vital parts of her system.

The full meaning of the Divine saying "my Kingdom is not of this world," had yet to be realized; nor was it admitted at the Vatican, "that the sword and sceptre were the weapons of the civil Magistrate, and that the Cardinals Bishops and even the Pope himself must renounce either their state or salvation." The conviction, however, that the freedom of the Church from temporal and political cares will tend to the advancement of her spiritual power, is slowly but surely making its own way, and in due time will work out its own destiny.

In 1872-3 Italian affairs were in a feverish state. Loans had to be contracted to pay the war bills, new taxes had to be levied to meet the swelling interest and general expenditure, and the downward tendency of the forced currency was for a time alarming. During this period nothing was done for Sardinia; the Island was altogether ignored.

It is a sound saying that "where there is a will there is a way," but the Ministers then in power apparently had not the will, and did not see the way; at all events they did not take it, and the Directors of the Sardinian Railways, grown weary of the adverse fortune that had so persistently followed them for so long a period, retired altogether from the management early in 1873, and handed the undertaking bodily over to the Italo-Germanic Bank, and an association of Italian Capitalists with Commendatore Servadio at their head. And here came the verification of another old saying "Truth is stranger than fiction." The Sardinian Railway had scarcely crept under the wing of the Italo-Germanic combination, and the new capital had only been just issued for the Sassari-Ozieri line, and the works set in

motion when another crash came. The new combination fell heavily — victims to over speculation — and Semenza and Servadio, like transient meteors, disappeared from the financial skies of Italy. The Italo-Germanic financial alliance did not turn out a happy one, and the Sardinian Railway was returned into Anglo-Italian hands instead of the promised money, which was to have been given in exchange for it.

The English Board could not however, be again re-organised, but all English interests united in giving Mr Piercy, whose functions had hitherto been limited to giving advice on engineering matters, plenary powers to represent them, and manage their affairs in Italy. On the Italian side Commendatore Segrè, a distinguished Italian, was clothed with similar authority, and thence-forward these two gentlemen cordially cooperated, at first concentrating their efforts in saving the Company from bankruptcy and dissolution, to the brink of which precipices it had been fast rolling.

The construction of the Sassari-Ozieri line was at once taken in hand, and completed by the time fixed by law (end of December 1874). Thus the Company's position was saved and all its obligations under the convention of 1870 were discharged, and all its rights maintained intact and unprejudiced.

The time had now come for the Government, in fulfilment of the last Convention, to purchase from the Company the "lines of the first period," unless, which was virtually the only other alternative, a new arrangement with the Company for the construction of the "lines of the second," period, and for working all the lines, could be arrived at.

Sig. Minghetti was then prime minister and Sig. Spaventa minister of public works. The latter apparently looked at Sardinian progress and Sardinian Railways with an eye of indifference, his policy was the "status quo ante," and a "masterly inactivity,"; the result was war between the Government and the Company.

It was contended on the part of the Government that there was no date fixed for the repurchase of the completed Railways

but the Company pointed to the words of the convention of 1870, which were "The Government shall, *after* the 31st December 1874," take the necessary steps. The Railways of the first period were to be opened by that date; this had been done, and the repurchase was to be the consideration for it, and the word "*after*," had unquestionably the same meaning, as when payment in the ordinary course is to be made "*after*," the delivery of goods.

The Minghetti-Spaventa ministry, however, could not be moved, and the prime minister in his reply to Sardinian deputies in the chamber gave as the ostensible reason that "the repurchase of the lines would entail on the Government a charge of a million and a half or two millions a year more than is now marked in the budget for Railway guarantees."

This startling statement was tantamount to an admission that the Company was receiving a less annual revenue than was its due by precisely the same amount as stated by the Prime Minister, for according to the law, as it then stood, the annuity for the repurchase was to be *exactly equal to the net revenue the Company was previously entitled to receive*.

The Government referred the question to the Council of State, and they decided against the contention; yet no action was taken upon the decision. The Company then consulted several of the leading lawyers of Italy, who were unanimous in declaring the interpretation of the Company to be correct. One of the points in dispute — the definition of net revenue — was full of novel and rather curious features. The law in force on public works says "under net revenue" is understood that which remains of the gross revenue after deducting "the expenses of," and then follow nine heads of expenditure. The Sardinian convention says that in determining the guarantee payable to the Company "maintenance and working shall be computed at 50 per cent.,"; these however are only two out of nine distinct classes of expenditure as defined by Italian law, which include extraordinary repairs, renewals, royalties, taxes, Government inspection, and amortisation, all of which it was sought to throw upon the Company

notwithstanding the express terms of the convention, and the consensus of opinion against the Government.

The breach went on widening, and the claims of the Company, as a matter of course, also became more and more enlarged. It was pointed out, that their troubles originated, when it became clear that the lands could not be given by the time contemplated, which lost them the opportunity of issuing their Bonds, with all the disastrous consequences that followed. The stormy events, which led to the regeneration of Italy, and to the downfall of the Company, disturbed for a time the national credit to such an extent, that Rentes fell from nearly 80 to 39, and, in sympathy with them Sardinian Railway stock fell proportionately. Its fate was further sealed by the guarantees given to new Companies, which were more adapted to the altered state of things, and compared with which the terms of the Sardinian Railways were ruinously adverse. Moreover, when the original convention was signed, all payments were to be in gold, and the expenditure of the Company had been in gold; whereas the guaranteed revenue was being paid in paper, the loss upon which in 1874 rose to 19 per cent; and the Company's revenue was still further reduced by an income tax of 13.2 per cent, by taxes on receipts of 10 per cent, and other general and local taxes, as well as Government charges; so that altogether upwards of 50 per cent of the original guaranteed revenue melted away, and returned in one shape or another into the coffers of the state, in addition to the extra heads of expenses specially mentioned.

Large claims were formulated by the Company, goaded by the treatment it was receiving, against the Government, amounting to over 13,000,000 lire, chiefly for past arrears, the correctness of which had been in anticipation remarkably confirmed by the Prime Minister's speech before alluded to. In the mean time the Sardes, beginning to despair of the completion of their Railways, commenced an agitation in Sardinia, which soon assumed a more and more serious aspect. Great meetings were held in the Island, at which the Sardes threatened to resist payment of taxes, and the tax-gatherers

threatened to resign; * home-rule , was mooted, and Signor Salaris and other Sarde Deputies pressed the claims of their country upon the Government in the Chamber of Deputies, demanding the completion of the Railways according to law; but no substantial result followed.

In the midst of this excitement the Minghetti-Spaventa Government fell, and Depretis — the never-failing friend of Sardinia — came into power once more, to the great joy of all interested in the Island. The Minister of Public Works of the new Government was signor Zanardelli, and he immediately resumed negotiations with the Company on a friendly footing; but at every change of phase new and hostile features seemed to spring up. The knowledge of the strength of the Company's position had spread abroad, and intriguers and * camarillas , were tempted to endeavour to step in between the Minister and the Company. They pressed into the antechambers of the Minister of Public Works, and all the arts, common to this class of individuals, were brought into play, but happily, owing to the prudence and firmness of the Company's negotiators, were exhausted without fatal results, though at one time it seemed as if the intentions and efforts of the Public Works department and the Company would be brought to nought by the machinations of these mischief-mongers.

The Session of 1877 was, however, fast passing away, and the anxiety of the Sardes to see arrangements made for the completion of their Railways was becoming intense. At this critical time the Prime Minister was unfortunately confined to his bed by illness; but, with the energy peculiar to him, he expressed a wish to see the Representatives of the Company in his bed-room. At that time there happened to be at Rome several influential Italians and Englishmen largely interested in the Sardinian Railways, and they accompanied the Company's negotiators to of Sig.^r Depretis house, and were immediately ushered into his bed-room where the scene, as narrated by an eyewitness, was most interesting and impressive. In obedience to a signal they surrounded the bed, where lay the Prime Minister stricken down by over-work, but happily only for a short

time. His reception of his visitors was most cordial; he expressed his anxiety that all difficulties in the way of the progress of Sardinia should be removed, and he admonished the representatives of the Company to accept the terms that were offered; the condition of the Budget would not, he added, admit of better, and they were to look to the future; then, after a short pause, as if animated by sudden inspiration, he continued " Whether as Depretis, Minister, or Deputy, I will always be the friend of the Company „.

These words acted magically on his visitors, and the advice was at once accepted. The prime minister breathed on the accumulated difficulties of 15 years, and they disappeared.

Depretis was too great a diplomatist to picture to the minds of those interested in the Company the possible alternative of long and endless litigation with a Government, that would test the vitality of any litigious suitors but the consciousness of this was no doubt realized all the more effectively in the minds of those present; and the thought of deserving the friendship and good-will of the " grand old man „ of Italy appears to have occupied the chief place in the minds of all on that remarkable occasion, when claims amounting in the aggregate to over 13,000,000 lire — certified to be correct by some of the first lawyers of the day, and which it had taken months to prepare — were cast aside in an instant, and an arrangement accepted which held out prospects only of interest upon capital that had been expended over 15 years, and this too after a few more years viz; the completion of the " lines of the second period „.

Immediately afterwards a new convention, embodying these terms, was signed and the paths of the Company have been from that time comparatively peaceful.

Under this new convention the kilometrical guarantee on all the lines, both old and new, was increased from 12,000 to 14,800 lire per annum, and a fixed annual allowance of 7,000 lire per kilometre was granted for working the lines; the difference between this latter figure and the gross traffic receipts to be divided between the Company and the Government.

The construction of these lines was entrusted to Mr Piercy, whose indomitable energy and perseverance had contributed largely to the new and improved position of affairs, and who had in the meantime been preparing at his own expense the definitive plans, and introducing some successful deviations, by which not only were the lines improved, but the estimated cost was reduced to a figure, which came within the amount of capital that could be raised upon the fresh terms conceded by Government. Mr Piercy too formally guaranteed that his estimates should not be exceeded.

In order, however, to obtain this result, the most careful attention to economy had to be given in every department in carrying out the works. Between Oristano and Terranova, the extreme points of the additional Railways, or, as they were called, the " lines of the 2nd period, " the formation commences at less than ten feet above the mean level of the sea, and gradually ascends, in a length of about 37 miles, to upwards of two thousand feet, with gradients up to 1 in 40, and curves with a radius of 15 chains; there were also four tunnels, of which two were over half a mile in length, several viaducts, a bridge over the " Tirso " having three main spans of 100 feet each, and several other bridges, having water-ways varying from 30 to 125 feet; and the country being broken and hilly for about four fifths of the total length of these lines, deep cuttings and high embankments, with massive retaining walls, were rendered necessary. Many of the cuttings and embankments were from 40 to 50 feet in depth and height, and several of them of considerable length. The cuttings were mostly in hard rock (granite or basalt), the soil being generally just deep enough for vegetation, but no more.

These works were carried on with unusual rapidity and economy owing to the system adopted of dispensing entirely with contractors sub-contractors and middle-men, and a description of it will not be uninteresting, as showing how efficiently and economically public works may be carried out in Sardinia, and indeed in any country, under such a system.

Where the work was of a nature that could not be mea-

-sured with accuracy, gangs of workmen under able foremen were employed by "the day," at an average wage of about three lire; but wherever the work was capable of measurement (and this was the case with almost the whole of it) it was let at a fixed price per cubic metre direct to the men, who formed in gangs of from 10 to 50 and sometimes more in number for that purpose; all the members of the gangs sharing alike in the labour and in the profits. Thus the men had a stimulus to exert themselves to the utmost, and the expense of detailed supervision was greatly diminished; the more work executed during the day, the higher was the sum each man received. Strict punctuality and impartiality in the payments, accuracy in the measurements, and attention to the health and comfort of the men (including the providing fresh water and cheap food) attracted workmen in crowds to the Island, and the competition for employment was great. The Company in this manner shared with the individual workmen the large profits which usually flow into the pockets of contractors and subcontractors, who as a rule "grind" down the men and "scamp" the work, but who in their turn are preyed upon by the usurers that advance the money required for their deposits, and for starting the work and carrying it to completion; and under such a state of things, contractors sub-contractors workmen and bankers profit but little, all living in a consuming circle; the lawyers alone make money, as the disputes and complications are endless.

The men were also saved to a great extent from the vampires, who come from afar to keep stores or "tommy shops," at the various stations along the line of works, by the prompt construction in these places of ovens where bread of excellent quality was baked, and given to the men at cost price.

With the object of expediting and facilitating the execution of the work, the men elected to live on the site of their labour, constructing their own huts, which were of the simplest kind, built partly with rubble stone plastered externally with mud, and partly with branches of trees and rough planks — one square metre of roofing materials and one set of planking being allowed for each man of every

gang — and the first two or three days' work of the men after arrival was dedicated to the erection of these huts, for which certain sites were allotted.

In the hilly and wooded portions of the line the works presented the most striking picture, each cutting swarming like a beehive, with men of every province of Italy, and every sort of costume, flanked on each side with rows of huts of the oddest architecture, the smoke of countless fires curling up through the overhanging foliage, and the little donkeys, carrying barrels of fresh water picking their careful way over the broken ground, added to the scene. Steam cranes, and mechanical contrivances of all kinds were in use at the deeper cuttings to hoist the blasted rock, and thus the great rock excavations were attacked simultaneously along their entire length, instead of by the usually slow process of "tipping", only at the ends, and the greater part of the contents of the cuttings was "sorted out", according to quality into broken stone for ballast, stone for dressed and ordinary masonry, retaining walls, and dry fence walls which enclose the line on both sides, and the necessity of quarrying stone along the lines specially for these purposes was thus avoided. Dealing with rock cuttings in this way has also, of course, the advantage of ensuring all the savings that a shortening of time can accomplish. As the price of labour fluctuated, according to the seasons and localities, the stone was broken into ballast by hand, where the cost of this operation was slight, and pounded by powerful stone-crushers driven by steam, where hand-work was too costly. River shingle and gravel were used for ballast, wherever they could be found within convenient hauling distance, but this could only be done in a few favoured places, and to no very great extent.

Some of the most important works, which "ruled", or measured the time to completion, were carried on by night as well as by day, the men working in relays by torch-light, in order to remove a cutting that stopped the progress of the permanent way, so

that the locomotive might "pass," and thus facilitate and reduce the cost of haulage of materials.

The system adopted of letting the work direct to the men, and their liberal treatment, attracted large numbers of workmen over from the Abruzzi, a novel feature in Sardinian undertakings, for up to this time the continental "navvies," employed on public works in the Island, had come exclusively from the northern provinces of Italy; and the first Abruzzesi, who came over, sent back such glowing accounts of their position, and of the labour, and railway works generally, that within a few months no less than 6000 of these blue-coated "navvies," migrated, and found profitable employment in Sardinia; the Piedmontese, Genoese, Lombards, Tuscans, and Sardes, together numbering about 5000 more.

The Italian "navvy," properly and fairly treated, is a sober, hard-working, respectful, and industrious man, and beyond question one of the best types of his class.

In completing the description of these works it may be added that extensive workshops were erected at the Chilivani junction, and fitted with the most modern machinery, for repairing locomotives, wagons, and for bridge-work, and they afterwards formed permanent workshops for general work. Chilivani is already an important junction, and will become still more important, when the "secondary lines," are completed, and Macomer will also become a junction of almost equal importance; the advantage of draining the adjoining lands and planting them with eucalyptus and other resinous trees, as elsewhere described, in order to render them attractive and salubrious will then be realized, as at these places passengers will have to stop to change trains and take refreshments.

By adopting the principles mentioned, the lines were constructed well, quickly, and cheaply — three essentials in the carrying out of public works notoriously difficult to combine — indeed it may be said to be a novel feature in the annals of railway construction, that, whilst the lines were solidly and well constructed, the Engineer's estimates were not exceeded, and the works were completed in

half the time originally contemplated, and prescribed by law; namely in about three years instead of six.

The junction between the northern and southern lines was effected in June 1880, and the whole of the lines were opened through to Terranova in March 1881; and so satisfied were the Government Inspectors with the solidity of the works, that, within a few months after completion, the lines were formally accepted and approved.

This undertaking altogether stands out in most favorable contrast with almost all other public works in the Island; most of which have been a source of continual trouble to the Government Engineers, and of dissatisfaction to the Sardes. No public road has ever been made in the Island that has not taken at least double the prescribed time, and the list of bridges swept away in consequence of bad work, is endless. The bridges on the Cedrino, the Tirso, the Flumendosa, and the Padrongianus and Concarabella rivers, and many of those along the road which goes south from Terranova, are at the present time impassable, and most of them in ruins. The small harbour of Bosa has been ten years in process of construction, and is still unfinished; the port of Cagliari progresses very slowly, and that of Portotorres was commenced two years ago, but no perceptible progress has yet been made; the harbour of Tortoli, also many years in course of construction, is still unfinished; the provincial roads in the South are at a stand-still; the waterworks of Sassari have cost nearly double the estimated amount, and yield an insufficient supply, far below the estimated quantity, and the retaining wall of the store reservoir is said to be so defective that it will probably have to be re-built; indeed the catalogue of failures and delays might be prolonged almost indefinitely.

It is believed, and with good reason, that this unsatisfactory execution of most of the public works is due to the system of letting the contracts by auction to the lowest bidder, but this method, happily for Sardinia, is now gradually becoming disused. All the railways constructed in Italy under this system have cost the Government vastly more than the estimated amounts, and have

given rise to numberless claims for extras, and law suits; works being frequently taken by people who rely on amended terms as the works proceed, or upon being "bought out," to avoid a dead-lock.

The viciousness of this mode of letting has just been signally illustrated in the neighbouring Island of Corsica where a line of railway, from Ajaccio to Bastia, about 160 kilometres in length, is being made by the French Government. The works were let in short sections by auction, the lowest bidder for each getting the contract; and already the cost has considerably exceeded the estimated price, and not a single yard of line is completed, and the eventual cost will be at least double the amount originally contemplated. The construction has been *progressing* for six years, and under the present system is expected to last at least as long again. It is said, however, that the Government intends handing over the whole of the Corsican railway, including the main line now in construction as also the several branch or supplementary lines which are to be added, to a public Company under a similar arrangement to that of the Sardinian railways; but it will take some time before the present contractors can be settled with and disposed of.

By the successful construction of the "lines of the 2nd period," the Sardinian Company was enabled in 1881 to give interest on the shares first issued at the rate of 2 per cent, and in 1882 a dividend of 5 per cent on all the shares was declared, and has been paid yearly ever since; and thus the original Share-holders, whose capital had been unremunerative for 17 years, at last received some return, and the Company was placed in a sound financial position; the ordinary shares, which at one time had sunk so low, as to be offered at 16 shillings each without finding buyers, rose to their par value of L. 10 sterling, at which price they now stand in the market with an upward tendency.

In 1879, whilst the construction of the lines of the 2nd period was progressing, the Italian Parliament voted the general law for the completion of the whole railway system of Italy, and, on a motion of the Sardinian Deputies, Depretis, who never forgets Sardinia,

inserted a special article (33) in the law, to provide that a system of "secondary" Sardinian railways should be commenced without delay; and the bill for their construction was to be presented to Parliament within a year of the opening of the lines of the 2nd period. Depretis, in a very able speech, recommended the metre gauge for these additional lines, which were to be local and supplementary, and would act as feeders to the main lines, and he gave a sketch of their approximate course, namely, one line was to cross the Island from Bosa to Nuoro, passing through Macomer, another from Cagliari up the centre of the Island to Sorgono — the capital of the Sardinian high-lands at the foot of the Gennargentu — and thence to Chilivani, with a branch to Lanusei and Tortoli, and others from Tempio to Monti, and Sassari to Alghero; and great was the satisfaction given by this programme in Sardinia, but, as will be seen, its execution has been considerably delayed.

Meanwhile, however, Sig. Baccarini, who was Minister of Public Works in 1880, visited Sardinia, to inaugurate the opening of the through line from Cagliari to Sassari, and being struck by the beauty and excellence of the "Golfo degli Aranci," as a natural harbour, and by the inconvenience attending the landing of passengers mails and goods at Terranova, suggested the extension of the railway from Terranova to the Golfo degli Aranci; and a special bill was at once presented to Parliament for this extension, authorising its construction, and working by the Company, upon the same terms, as the other lines already completed. This bill was passed in 1882, and the construction of the line, which was 22 kilometres in length, was executed on the same principle, and with equal expedition, as the lines of the 2nd period, and was opened to the public early in 1883. A pier for landing passengers, mails and goods direct from the steamers, without the intervention of small boats, is now being constructed in the gulf at the extended terminus.

When Sig. Baccarini was in Sardinia he also instructed the Company to proceed with making the necessary surveys, plans and sections for the "secondary railways," seeing that the lines of the

2nd period were fast approaching completion, and the date for presenting the special Bill for the Sardinian local lines was not far distant. Thus the rapid construction of the lines of the second period, which led to their completion nearly three years before the time fixed by law, hastened the advent of the secondary lines.

These surveys and plans were accordingly at once proceeded with, and some of them were presented to Government in 1881, and others in 1882, but the Government took no further steps for some time. Meanwhile the Sardinians could not restrain their impatience, and to an interpellation of deputy Giordano, made in Parliament in March 1882, the Minister of Public Works replied * that the Bill for these lines was almost ready for discussion; * and, if reasonable terms could be arranged, it was intended to * devise some means of entrusting their construction to the same * Company that owned the main line, and it might therefore take a * few weeks, he would not say months, but *weeks*, before he could * present the project of law .

This Bill was presented to Parliament on the 27th June 1884, and would have been discussed in that session, but the Deputy who was the *Relatore* of the Parliamentary Committee, and had to report upon the Bill, happened to be an opposition member, and of obstructionist tendencies; and he, so it is currently reported and believed, seized the favourable opportunity that presented itself of putting his wishes and tactics into practical effect, by suddenly leaving Rome for Sardinia with the proof sheets of the report in his pocket; having however in his favour the plausible excuse afforded by the news of the outbreak of cholera at Naples, which no doubt would, as it in fact did, necessitate the establishment of a Quarantine for Sardinia. His object however was effected, and the Bill could not be discussed until Parliament re-assembled in the winter; it was however then at once approved by the Chamber of Deputies and the Senate, and became law on the 22nd of March 1885.

The construction therefore of these * secondary lines , seems now within * measurable distance , and if the work is entrusted

to the present Company, there would be confident grounds for concluding, from the precedent afforded by the construction of the " lines of the second period, " that these additional lines would be completed, and opened to the public, long before the dates fixed by the law. It will be observed that the branch line between Sorgono and Nuoro has been struck out of the programme; the Company did all in its power to retain it, and lodged the plans, but it was not favoured either by the minister, the commission, or the " relatore. " For the lines from Bosa to Macomer, Macomer to Nuoro, Cagliari to Isili, and Monti to Tempio, four years are allowed by the law for construction, and four years more are allowed for the lines from Sassari to Alghero, Ozieri to Chilivani, Isili to Sorgono, and Iglesias to Monteponi; and a third period of four years is allowed for the lines from Tortoli to a junction with the Cagliari-Sorgono line, and from Ozieri to a junction with the Macomer-Nuoro line.

The width between the rails on the existing lines is 4^{ft} 8 ins $\frac{1}{2}$, and the secondary lines are to be of the metre gauge, *i.e.* 3^{ft} 3 ins $\frac{1}{2}$. This difference of gauge will in some respects be beneficial, as, owing to the mountainous nature of the country, very sharp curves will be necessary, and if the line were laid to the ordinary gauge the trains would have to run very slowly, or the danger would be great. Moreover the break of gauge is no great inconvenience in the present instance, because passengers would have to change trains at the junctions in any case, and with properly contrived appliances, goods can be easily, safely, and cheaply, trans-shipped.

The actual cost of constructing the existing lines was about 200,000 lire per kilometer, equal to about £. 12,800 sterling per mile. The secondary lines, though the country traversed is in many places difficult — more difficult on the average than the old lines — by the adoption of the narrower gauge, will admit of sharper curves, and lighter works generally; and, as there will be no great terminal station, and the rolling-stock will be less costly, the outlay per mile will be of course proportionately diminished.

If however the Government should unfortunately be induced to

follow the old system of putting the works up to auction, and letting them to the lowest bidder, in the event of the present Company not seeing its way to accept the terms stated in the law for constructing these lines, there can be very little doubt, again taking past experience as our guide to a conclusion, that the usual consequences will most probably follow; and that the time fixed for completion will be at least doubled, the work will be "scamped," and that an application will have to be made at no distant date to Parliament for a further grant of funds to complete the lines.

The decision of the Government in this matter has a most important bearing as affecting Sardinian interests, and apart from the substantial advantage, which the Company possesses in being able to offer ample security for the due performance of the contract, it has all the necessary plans, as well as a practised staff of engineers, and other officials, with extensive plant, workshops, and materials, and last but not least, un-rivalled facilities for transport, in its ownership of the existing Railways. On the other hand it is of course the obvious duty of Government, in any arrangement that may be made, to be satisfied that they will receive full value *in works*, in return for the considerations they give *in money*; and as they have had the detailed plans and sections before them for some years, and have at their command a competent staff of practical experts, there *should* be no difficulty in arriving at a conclusion, and no doubt on the result of their investigation the ultimate decision will depend.

The management of the Railways and the working of the traffic in the various departments next demand attention, and though there is not much — either novel or practical — to be derived from the knowledge, yet it will be seen, how these things are conducted in Sardinia, and to what extent the Country is able to supply its own requirements.

The "Permanent Way," is kept in order by a large staff of workmen, one to every kilometre; and, as the railways are single lines, this is a liberal allowance. The workmen reside in houses

specially built for them on the sides of the line, and close to their work; their wages average about two shillings a day, and their wives and children who attend to the gates at the level crossings receive for these services an additional payment.

The first portion of the original line was laid with iron rails of the "vignolle, or flanged pattern, (33 kilos to the metre, equal to 66 lbs per yard); "chairs," are not used, and the rails are "fished," together and "spiked," to the "sleepers." The last made portion of the line was laid with steel rails, of the same weight and section as the iron; neither steel nor iron rails have yet needed renewal.

The sleepers first used were either from the Baltic, or maritime pine from the neighbouring island of Corsica, but they did not "last," and the average cost was about three shillings and sixpence each; oak sleepers from the Sardinian forests are now invariably used, and though the price exceeds that of the pine wood, yet they are actually cheaper, as they will last twice as long; and wherever the line had been originally laid with pine sleepers the latter have been all gradually replaced by oak.

Ballast of excellent quality is to be found on some parts of the line, and the cost seldom exceeds two shillings per ton.

The fences along the line in the northern district are stone walls, about four feet high, dry-built and without coping, the cost on an average being about two shillings per "running," metre. In the southern district, the fences are of cactus or prickly pear; both sorts of fence are effective to prevent trespass by cattle, and neither requires much care or attention.

The width of ground between the fences on each side of the railway averages 65 feet, which would admit of doubling the line, when it should be found necessary. The land on each side has to be kept free of herbage, on account of the fires which in the dry summer months would otherwise be constantly occurring.

There are extensive work-shops for the renewal and repairs of locomotives, carriages, wagons, and permanent way; the axles, tyres, wheels, plates, tubes, and rails, being supplied from England, but all

labour and "fitting," even to the making of "switches and crossings," are done at the work-shops, each of which is under the supervision of a chief engineer with two foremen.

When new locomotives or other rolling stock (except wagons, which are constructed at the railway work-shops) are needed, they are obtained by tender. Formerly they were supplied by English makers exclusively, but the Italian firms at Turin, Milan, and Brescia are now able successfully to compete, doing as good work, and at no greater cost.

The "traffic" arrangements are under the supervision of a chief of department, assisted by three inspectors, who are *always* on the line.

There are at present two trains a day each way, and the average speed, throughout the 411 kilometres now working, is 30 kilometres (about 18 $\frac{1}{2}$ miles) per hour, stoppages included. This, though falling far short of the speed of express trains on our main lines, is quite equal to the pace of many of the trains on the branch lines of some of our best railways, especially those in the southern and agricultural districts. Moreover it is fully equal to the average speed on the grand trunk railways in America and Canada, where the country generally is "dead level," and the line perfectly straight, and where the stations are nearly 20 miles apart from each other; and when it is taken into account that the Sardinian railways, excepting from Cagliari to Oristano, are mountain lines, with gradients up to 1 in 40, with curves some of which have a radius of 300 metres, the travelling cannot be considered as slow. Indeed under all the circumstances, the speed of the trains, and the accommodation generally, are matters rather of surprise and praise, than subjects of complaint or censure.

The maximum fares and rates as fixed by the Convention, are not to exceed for passengers 10^c per kilometre 1st class, 7^c 2nd class and 5^c 3^d class. The rates for goods vary according to quality; but *all goods of the same class are charged at the same uniform mileage rate*, varying from 7^c to 16^c per ton per kilometre according to the class of goods carried. The Company however charges rather lower than these limits for 3rd class passengers and for some goods.

To these fares and rates have to be added the Government duty of 13 per cent on passenger and "fast," goods traffic, 2 per cent on "slow," goods, and a stamp duty of 5^c on every passenger ticket in-voice or way-bill.

The passenger traffic forms more than half of the total receipts; and of this the 3rd class contributes about nine-tenths.

The rolling stock is good and substantial, and fully equal to the requirements of the traffic; it comprizes in addition to locomotives, carriages and goods, mineral, and ballast wagons; also an ample supply of special rolling stock, such as royal saloons, long wagons for the transport of timber, girders, or other goods of unusual length, fitted with Cleminsons flexible wheel-base, horse-boxes, travelling cranes, and travelling water tanks; the latter are fitted up with powerful force pumps, and are used for supplying water direct into the cisterns at the stations, and the guard-houses along the line, where there is no water from nearer sources.

The average daily "run," of a locomotive is about 70 kilometres, and the average consumption of coal is about 9 kilogrammes per kilometer, equal to about 30 lbs. per mile; in making comparisons, it must be remembered, that, for one half the whole length of the lines, the gradients vary from 1 in 40 to 1 in 55.

An ordinary train consists of a locomotive, three or four passenger carriages, and four or five goods waggons, with a van for the mails, luggage and brake; and there are no separate goods trains except on special occasions.

The annual consumption of coal is about 10,000 tons. It is "first-class Cardiff," and costs c. f. i. about 26 shillings per ton.

The auditing and accountant departments are not elaborate, but no elaborate system of book-keeping is needed; the capital account is practically closed, and none of those burning questions as between capital and income, which agitate the minds of crotchety shareholders, and weak-kneed directors, can ever arise.

The law business of the Company is transacted at a fixed sum per year, as is now the case on most of our English railways.

The solicitor does not however give his exclusive time to the affairs of the Company, but is allowed to take other business; but on the other hand his remuneration does not amount to as many hundreds as we pay thousands. Land valuers and surveyors are paid for their services according to the time occupied, the average pay is about twelve shillings per day. The railway doctors, of whom there are several in the various districts, receive for their services, (which are not exclusive) a very small sum in cash, but they have a perpetual free-pass over the line for themselves, and, on particular occasions, for their wives and families.

It is the duty of the doctor to attend any workman on the line when ill or injured, and medicines from the stores of the Company are supplied gratis. There is a sick fund, to which every employé has to contribute a sum equal to three per cent upon his salary or wages. Every member is entitled to a weekly payment in case of illness or accident; and, in the event of death, his family is compensated. The Company also contributes annually a liberal sum towards the fund. The percentage of sick and dead, as appears by the book of the fund, is less than the average on our English railways.

The Sarde law is the same as the English law with regard to liability for accidents; but no case of either injury or death has yet arisen since the opening of the lines.

There are no continuous or automatic brakes, block-signalling, interlocking, or other new-fangled appliances, to perplex and bewilder signalmen guards and drivers; the traffic is worked on the block system by means of the telegraph from station to station, and trains are started by the blast of a bugle as in the good old times of our first railways.

Sardes are employed in all departments excepting where special railway experience is needed, and in such cases Italians from the mainland are selected; the station-masters, clerks, engine-men, guards, mechanics, and labourers, are all Sardes. As a class they are a hard-working, and intelligent body of men, and fully equal to the average on most railways. The hours of labour, considering

the country and climate, are long, ranging from 10 to 12 hours per day, and commencing even in the offices at 7 a. m. The salaries and wages cannot however be said to be proportionately excessive, as with the exception of the general manager, no official receives over £. 200 a year, and the wages of labourers vary from $1s/6d$ to $2s/$ a day, in both the northern and southern districts.

The scenery along the lines is in many places interesting and picturesque — in some parts approaching to grandeur — and deserves a passing comment. The olive groves near Sassari, and the valley of Semestene in which the line rises from Bonorva up to the basaltic plateau above Macomer, and the descent from the plateau of Bauladu towards Oristano, unfold an enchanting panorama, presenting lovely scenes; on the right are the forest-clad mountains of Santo Lussurgiu, on whose slopes stand the picturesque villages of Bonarcado and Seneghe, and the far-famed orange groves of Milis, and in the foreground are Tramatza, Solarussa Oristano, Cabras, and many other villages dotting the plains, broken here and there by stagni, and stretching away to the horizon, which is bounded by the sea, in the far distance the “ classic Tharros ” is just discernible. Between the Oschiri station and the Golfo di Aranci the scenery is also fine, but wild and rugged, and the Limbara range, as seen from the line, looks grand and imposing; the fantastic outlines and peaks of the nearer granite mountains, with their peculiar vegetation, and the clear waters of the streams, combined with the total absence of cultivation, or of any sign of the presence of man, form together a sombre but attractive landscape which, on nearing Terranova and towards Marinella and Figari, is diversified and beautified by occasional sea-views, where the line touches the rocky surf-bound coast. The finest scenery in the Island will, however, be opened up by the new lines which traverse magnificent mountains and forests, and “ touch ” quaint and picturesque villages, full of novelty and interest.

The history of the Sardinian railways in the past, and the present position and management, and future prospects, have now been given,

and a few sentences upon the administration of the Company, and the Government arrangement will conclude a chapter, which has been protracted to a greater length, and entered into fuller details than was at first intended. Railways, however, have such a vitally important bearing upon the prosperity of a country and the habits of its people, that it was felt desirable that the subject should be fully gone into; it is hoped too that the description will not have been uninteresting, nor prove altogether un-instructive.

The administration of the Sardinian Railways is vested in a board — consisting of six directors, of whom four are Italian and two English — and the present board stands deservedly high in public estimation. The Marquis of Villahermosa, a resident Sardinian nobleman, is the Chairman, and the “ *Direttore generale*,” is Commendatore Segrè, who resides in Rome, and who has practically the control of all the company’s business, in the management of which he has been deservedly successful.

The arrangement with the Government is the guarantee to the Company of an annual net revenue of 14,800 lire per kilometre as consideration for constructing the lines, and a further guarantee of gross revenue from traffic of 7000 lire per kilometre, to meet the expenses of working the lines; with a proviso, that, if the gross receipts do not in any year amount to that sum, half the difference between the receipts and the guarantee is to be paid to the Company, and if they exceed that amount, the excess is to be divided between the Company and the Government, in the proportion of 54 to 46.

The guarantee of a fixed sum towards the interest upon the money required for original construction of the lines was, no doubt, an essential preliminary to the raising of the necessary capital, and the guarantee of a further sum, to meet the expenses of working the traffic, was an equally essential provision and the logical sequence of guaranteeing a *net* revenue.

The traffic being as yet in an undeveloped state pending the completion of the supplementary lines and the adoption of the other measures which will be elsewhere referred to, the Government has

hitherto paid the whole amount of the guaranteed net revenue as well as a small sum, variable according to the fluctuations of traffic, under the guarantee of gross revenue.

This was an equitable arrangement and has succeeded in its main object, viz: securing the Company against any loss on the working; and when and as the traffic increases, the Company will be able to supplement the guaranteed net revenue by the surplus profit from the working; and it seems right in principle, as the Company is thus made directly interested in developing the traffic.

This principle of arrangement in respect of working expenses is however unique in its way, and like all other novel principles is, no doubt, capable of improvement in details, and the opportunity for amendments, if any be desirable, will soon present itself.

The general scheme for the re-constitution and working of the whole of the Italian railway system has recently been undergoing searching Parliamentary investigation, and important modifications and readjustments of fares and rates have been determined on; Sardinia will of course accomodate herself to these changes, and will participate in these advantages, and a revision of the arrangement will then become necessary, and it will doubtless embrace existing lines, as well as the authorized extensions.

The origin progress and various vicissitudes of the Sardinian railway Company give rise to diverse reflections.

The seeds were those of the King, they were sown by Cavour and nurtured by Depretis; it is the only railway throughout the whole of Italy, that stands on its original basis; all the others have passed into the hands of the State, and been leased to "working, Companies. The Sardinian Railway, however, remains to this day as it was originally planned; and may not this be looked upon as a happy omen of the greater permanency, that awaits the infinitely greater work in which the same hands were engaged, and under any circumstances may it not be made the agency of restoring Sardinia to its ancient prosperous condition. Should the Government, disregarding the sentimental aspect, determine to acquire

these railways, as it has the other railways of Italy, it may, by placing such light rates upon products, which form the elements of successful industries, directly ensure the development of commerce, which is the ground work of prosperity. On the other hand should Government prefer to leave the Sardinian Railways as they are, the same object may be attained by a new arrangement; the Government and Company making balancing concessions.

This matter, however, so vitally affecting the interests of Sardinia will be referred to at length in the concluding remarks at the close of this volume, when discussing the general measures for the amelioration of the Island, and need not, therefore, be dilated upon further in a chapter, which has already been unduly extended.

CHAPTER XI.

Festivals — Origin — Religious services — Feasting — Reunions — Easter Ceremonies — Santa Maria — Valverde — Sant'Efisio — La Madonna del Mateno — Vergine dei sette dolori — San Priamo — Maggio — Saint John — La Varda — Correiolei — Grammatigu — Compare e Comare — Superstitions — Las Spungas — Accabatura — Tarrantula — Sardonic Grin — Timoria — Relics — Heathen customs and English Fairs.

The festivals (called "feste,") in honour of Saints — local and general — are between 80 and 100 in number. Some of the more celebrated are observed universally throughout the Island, in the cities and towns, as well as in the rural parishes; while others are held only in the particular districts with which the Saints had some special connection. All of them combine feasting and amusements with religious ceremonies.

Those in the Country districts are called "Novenas," and last for several days, though seldom extending to nine, as the name would seem to imply. They are usually held in some secluded spot in the forests, or in the plains, where the Church dedicated to the special Saint is situated, and which is used once only during the year for this particular celebration.

These "Feste," were no doubt in their origin devised for devotional purposes — the offerings of thanksgivings for the past and prayers for the future; — but the religious element, though not altogether lost sight of, is to a large extent overshadowed by the

festivities which are mixed with, and form the greater and more attractive part of the proceedings.

On each day of the Feste several services of the Church are held, and mass is celebrated, but between the ceremonies and far into the night, often until early dawn, feasting and dancing, and every other sort of amusement, are freely indulged in. The fervid out-pouring of thanks for the cure of a broken leg, or a broken heart; the passionate entreaties for the restitution or substitution of a lost pig, a lover, or a husband; the despondent wailings of those who have never known a mother's joys or a mother's sorrows, and the humble supplications for relief during pregnancy, coupled with solemn promises never to be in the same predicament again, are indiscriminately mixed together, and, intermingled with the sounds of revelry and feasting, form a weird and discordant contrast, which jars upon the ears and senses, and is provocative of very different feelings from those which are supposed to have brought the assembled people together.

These "Novenas", therefore must not be looked upon in the light of religious festivals, though the church services are numerous attended and devoutly observed, but rather as reunions of relatives and friends from neighbouring villages; as such, they are happy meetings, and admirably adapted as excuses for Holidays of recreation and amusement; and it is greatly to the credit of the Sardes that these occasions never degenerate into licentiousness drunkenness or immorality.

A short description of some of the most important "feste", will best illustrate their character, and will not be uninteresting.

The Easter ceremonies are the grandest and most important, and are kept universally throughout the island, continuing for several days in succession. In the procession, which is generally the first part of the proceedings in the cities and large towns, soldiers with arms reversed, and at slow march, form an advance guard; then follows a troop of ladies, dressed in deep mourning and with black veils, each holding a large wax candle, which also serves as

a walking-stick. The figure of the Virgin Mary, as large as life, on a platform studded with lighted candles, is carried by another detachment of ladies similarly attired, but wearing white kid gloves and fine worked cambric kerchiefs; a company of soldiers comes next, forming another "corps de garde", and playing the most lively airs, in curious contrast with the religious silence of the rest of the procession. Next follows a strong detachment of men, dressed in white robes with white kerchiefs on their heads, and with white gloves on their hands, so that it is difficult at first to distinguish which sex they belong to, male or female. After these come several lots of children, representing angels, decked with tinsel ornaments and paste-board wings, and carrying in their hands dishes, filled with thorns and nails and sponges, as emblems of the Crucifixion. Immediately following are the images of Nicodemus and Joseph of Arimathea, gorgeously dressed in Oriental style, and accompanied by two men in black masks, representing eunuch slaves. Then comes a coffin, containing the figure of our Saviour after the Crucifixion, with a shroud and the usual funereal appendages, — a black pall and canopy — protected by a guard of soldiers and priests; and another concourse of females, wearing white veils, closed the procession. A large crowd followed; and they pass through all the principal streets, and visit all the churches several times during the day; and at night the same ceremony is repeated amidst a blaze of lights, which renders the general effect impressive and imposing.

On the third day the Resurrection of our Saviour is celebrated by the ringing of all the bells in every church in the city, the signal being the elevation of the host at high mass in the Cathedral. This of course is in addition to the procession, which is a standard performance in each days programme, and on the last day a pontifical mass is celebrated by the Archbishop, which seems to be highly appreciated.

Another important "festa", is that of "Santa Maria", which continues for nine days. It is held each year in September, and is celebrated in many parts of the Island. The scene of this relig-

-ious revelry at which I was present was an ancient Church or Chapel, built in the 10th century, and situated in the centre of a dense forest, with no village or house within many miles. The site of the Church is on the southern slope of a gentle eminence, where three valleys converge, each valley well-wooded and watered by rapid rivulets, which at their confluence form a fine broad river. Towards the west, far as the eye could reach, was a stretch of continuous forest with the Mediterranean in the distance, and towards the east was a range of hills and mountains, towering one above the other, and culminating in the snow-capped peaks of Gen-nargenta; the whole presenting a picture of great natural beauty and grandeur which could scarcely be surpassed.

Surrounding the Chapel was a cluster of houses, built of stone, but neither floored nor plastered, many of them being hewn out of the solid rock, and of the very roughest and rudest construction; here however several hundred persons, of both sexes and all ages, congregate from the neighbouring villages, and remain during the whole continuance of the Festa.

They bring with them such cooking utensils and articles of furniture as they need, and supplies of meat and drink are forwarded to them each day. The cooking is done, and the meals are taken, in the open air, but how so many persons could be squeezed into so few houses for the night was a mystery which I endeavoured to solve without success, and I came to the charitable conclusion that it could only have been decently managed by a system of "relays," a conclusion which the different habits of the devotees seemed rather to favour.

The proceedings each day were almost identical. Religious services and high mass from 8 to 10 in the morning, then "colazione," which lasted till noon, and after that dancing, which was performed on a plot of level ground in front of the church, that had evidently been prepared for the purpose. The "ballo tondo," seemed to be the favourite dance, and was kept up till 5 o'clock, at which hour there was another church service lasting till 7 P. M.; and

at 8 o'clock eating and drinking were again resumed, and, with intervals of dancing, were carried on till midnight; some of the youngest and most enthusiastic prolonging the orgies till daylight, when no doubt they took their turn in the beds which had been just occupied by the more staid portion of the community, who had retired to rest some hours before. There was no instrumental music; the accompaniment to the dancing being a monotonous singing.

The entertainment was however occasionally varied by a song, with a solo and chorus, not very pleasing to the ears of a stranger, but evidently highly appreciated by the native audience.

Shooting with a ball at a mark, and firing blank cartridges into the air with no apparent object, formed part of the festivities, but there was no other game or amusement, except *love-making*; this however was carried on freely and openly and would, I was told, in due course produce its fruit in the shape of formal engagements and marriages.

A very similar pilgrimage takes place yearly at "Valverde", a hamlet situated a few miles from Alghero, and here there is a special romance attached to the ceremony. The story runs, that in 6th century a small stone image was found at Valverde which proved to be a Madonna, and it was taken to the cathedral at Alghero; but the image, not liking its new quarters, disappeared during the night, and was found a few day afterwards, reposing in its old bed at Valverde. A shrine was then, as a matter of course, built there for it, and afterwards a church, and since then annually there has been a pilgrimage to the place, not only of the Algherese, but of the people from all the country round for 40 miles. The festival, which combines religion and merry-making, is the same as the "novena" of Santa Maria, but on a much larger scale, gathering, it is said daily over 4000 persons, some of whom remain the whole four days during which the festival lasts. The only religious additions to the services and masses are the adoration and kissing of the Image.

St. Eufisio is the chief saint in the Sardinian calendar; he was an officer in the army of Diocletian, and for his conversion to Chris-

-tianity was beheaded at Nora, a small town about 20 miles distant from Cagliari, and on the anniversary of his martyrdom, there is a grand procession to the place of his decapitation.

The ceremony very much resembles those of other feste, excepting that the journey to the place of assembly occupies two days, and that the grandest carriage in Sardinia is kept for the saint's exclusive use on this occasion. The carriage is something like a small edition of our Lord Mayor's coach, and the Saint is carried in it to Nora with as much pomp and display, as "his Worship," is conveyed in his state coach from the Mansion House to Westminster. At Nora (where in some years upwards of 25,000 persons are assembled) the usual religious ceremonies take place, followed each day by the usual festivities, and at the end of the week, the saint is brought back to Cagliari in his own carriage and with the same pomp and ceremony as before.

These honours have for upwards of 200 years been paid to St. Efsio, by reason, it is stated, of his having removed the plague from the city in the year 1656; and, when the French besieged the city A. D. 1793, in answer to the prayers made to him during the bombardment, he caused the defeat of Latonche Tourville, though not before that impious admiral had battered the Saint's Cathedral with shot and shell, some of which are incrustured in the walls, and may be seen at the present day.

At Fonni, the festival of "La Madonna del Mateno," is held just before whitsnutide, and, as a fair and "festa," combined, it is one of the most interesting in Sardinia. The Improvisatori (of whom there is a considerable number in the Island) were here in great force, but singing and dancing occupied the people far more than the lyrists. The devotees also mustered strong; they crawled on their knees from the church door to the high altar, and there were allowed to kiss an image of our Saviour, a small doll fantastically dressed, reposing in the lap of another and larger doll, which represented the Virgin. The infant Christ was kissed in a variety of ways, from the salutation on the toe to a lengthened embrace and kiss

on the forehead, and, considering all this wear and tear during two centuries and a half since its institution, it is astonishing that any thing was left for this annual exhibition.

This ceremony was however only preliminary to a miraculous and mysterious performance in a small chapel adjoining, to which only a limited number were admitted at a time. The first appearance on entering gave one the idea of a cabinet of curiosities, for there were glass cases hung all round the walls filled with strange looking articles. A curtain hung down in front of a small altar, by the side of which stood a Priest holding a dish in his hand, for the lire and centesimi, which poured in plentifully on the occasion. Then, at the tinkling of a bell, all dropped on their knees, and at the same time the curtain rose, and a figure of the Madonna was seen arrayed in gorgeous costume. The devout then began to cross themselves furiously, as if they were doing it for a wager, next arose a muttering and lispings of what were no doubt intended for prayers, but which, being indistinctly heard, sounded much more like the chirping of sparrows. Another bell then rang, and the figure (which was on a pivot) began to revolve; the effect was electrical, the men kissed the ground, touching it with their heads after the mahometan fashion, and the women broke out into groans and shrieks and began striking their bosoms, and were gradually working themselves into a state of hysteria, when fortunately the curtain dropped, and the image was closed from view.

Upon an examination of the cabinets afterwards, their contents proved to be relics of Martyrs and Saints, valuable only from their holy associations. One of the relics was a representation of the flagellation of our Lord, and part of the column to which the figure was attached, was, according to Fionni faith, a piece of the identical column to which our Saviour was bound; if that be really the case, it seems almost a pity that it should be kept in a small chapel in the wildest part of Sardinia, instead of adorning one of the cloisters of "Santa Maria Maggiore" at Rome, where there is a pendant relic to it, in size and interest, in a piece of the pillar

upon which the cock stood and crowed, when St. Peter denied His Master.

The fair was a lively and busy scene, made so principally by the Genoese, who brought with them fine clothes cotton and linen. The natives, who seemed comparatively indifferent whether they did business or not, brought some goods from the neighbouring villages, comprizing coarse woollen cloth, saddle-bags, carriage-wrappers, carpets, towels, and coverlids, which they were willing either to exchange or sell, as best suited their customers. It was amusing to observe how the gentler sex induced their husbands and lovers to make purchases, which they evidently desired to shirk; such arts and victories are not however peculiar to Fonni or Sardinia; in our own country we are equally happy in the possession of relatives equally fair, whose all powerful influence with fathers brothers and husbands it is often found impossible to resist.

The festa of "Vergine dei Sette Dolori", which is held almost universally throughout the Island, affords a grand opportunity for seeing all the costumes of the country, for the peasants, wearing their gayest garments, come to do penance before a figure of the Virgin during the *seven* days of the feast. The dressing of the figure is entrusted for the year to a certain number of ladies belonging to the aristocracy, and at the end of the year lots are drawn, and the names of the noble ladies, who are to have the custody for the next year, are read out from the high altar, with a benediction on those whose charge has just terminated.

The feast of St. *Priamo*, held at *Oliastro* is another important festival; a wooden image of the Saint, is brought in a cart to a small church, situated on the side of a steep granite mountain, and the evening is then spent in amusements, which continue till sunrise, when those who are not too tired proceed to matins in the church. The mid-day mass however is the service most frequented, and a procession is then formed; the effigy is carried by four priests round the village, the sacred relics being secreted in the bosom of a chosen priest, who is attended by several other ecclesiastics, as well as by a military

escort. The afternoon is spent in horse racing and other amusements, one of which is the riding at and cutting through with a long knife the neck of a fowl suspended by a string from the branch of a tree.

An interesting episode during one of these "feste," is narrated thus. "A party of six young females were induced by some banditti, who were present at the festa, to pay them a visit in the mountains. The evening was spent in feasting, singing, and dancing, and during the night the men kept watch with strict gallantry. The next day was passed in similar amusements, and the following morning they started for the Church to continue the celebration of the Novena. In the meantime their absence had been discovered, and the report was spread that they had been carried off by violence, and the enraged relatives at once armed themselves for vengeance. By accident, they met on the road, and though each party had weapons ready for action, the presence of women prevented violence, and a truce was declared. Meanwhile a villager, who was the bride-groom of one of the females, held his gun pointed at one of the banditti, who had been a great rival in his bride's affections, and who had fled to the hills after an unsuccessful attempt on the villager's life. The Bandit had his gun also in readiness, and a minute more would in all probability have ended one or both of their lives, had not the bride observed what was going on, and, rushing into her husband's arms, seized his gun and discharged the contents into the air; then, placing herself in front of her husband, she led him up to the Bandit, and he, bewildered at her brave and noble conduct, gave up his gun to her, which she fired off and then restored to him. Mutual explanations followed, the whole affair was treated as a joke, and a merry feast, during which the cause of dispute was discussed and cleared up, terminated in mutual forgiveness."

Among the most interesting ceremonies is the "Maggio," in the flower season, at the beginning of May. An oak branch is fastened before the window of some favourite damsel, selected as the heroine

of the "festa," and a flag, made of embroidered silk is suspended from an ornamental pole from which small bells are lightly hung, so as to be moved by any breeze, and the adjoining houses are adorned with flowers and silks. The young men then form a procession, and by songs and cheers invite the young girls to join the "Maggio." The lasses soon join, and they proceed to bind with silk ribands all those whom they either meet in the streets or call upon, and then playfully release them, when they have contributed something towards the "festa." The rest of the day is spent in feasting dancing and other amusements, among which the singing of songs, in praise of the village flora, forms an important part.

At the "festa" of St John, in a small church near a small stream flowing into the Tirso, all the maimed the halt and the blind assemble together, and when the midnight bell tolls, they plunge or are plunged into the stream, which at that moment is supposed to possess a miraculous healing power. Many cures are said to have been effected, but whether this is brought about by the confident assurance of being cured, or by fear of a cold bath — a process to which the Sardes generally have a rooted objection — is uncertain.

It is not however a universal panacea, and to those who are not cured by the cold water system, there is another remedy open, viz, the stealing of apricots or other fruit at midnight *without being observed*, for, if detected, the efficacy is rendered valueless.

In some of the northern villages during high mass, a ceremony called "La Varda," is performed by men on horseback, armed with guns, riding in procession to the church in single file, and discharging their guns in honour of the tutelary Saints of the village. They then proceed in double and afterwards in triple file, repeating the "feu de joie," each time. All the villagers join in this, and when "banditti malevolenti and fuorisciti," existed in the Island, they very often took part in these rejoicings, and were allowed to do so with impunity, there being a general truce or amnesty for the occasion.

Another custom or ceremony is the "Corriolei," or feast of the

* Hunches *, towards which the richer inhabitants of the village contribute meal, wine, and bread; and these viands, which are first taken to the church and there blessed, are then placed on a public table in the square or market place, and are partaken of indiscriminately by strangers and poor people.

There is a singular custom connected with wool plucking, and called * Grammatigu, * which seems to be almost exclusively confined to the Tempio district.

When the * Clip * is finished, the wool requires immediate preparation for use, and, instead of each family preparing its own, an entertainment is arranged at every house in succession; from thirty to forty young girls usually attend, and they sit cross-legged on the floor with a hank of wool assigned to each, and while at work their lovers loll and idle by their sides, singing improvised love songs, till the work is finished, when bonbons and cakes are produced, and the * ballo tondo * is resorted to for and kept up the remainder of the evening.

Amongst the most interesting of the superstitious ceremonies is that of * compare e comare, * or the annual nomination of godfather and godmother of Saint John, whose festival is held in June. In the month of May some seeds of corn and barley are sown in small vases of cork, and kept in a dark warm place, so as to be in full vegetation for the festival. On that day the young people of the village assemble in procession on foot and on horseback, and perambulate three times round the church; they then dash the vases on the ground, after which there is the regular feasting usual on these festive occasions, followed by dancing and other amusements.

In the evening, a large fire is lighted, and the selected godfather and godmother stand on opposite sides of the fire, each holding in the right hand the end of a long stick, which they move backwards and forwards three times, stretching their right hands three times across the fire, and the formal ceremony is then complete. The children after this amuse themselves by jumping across the fire, and with such rapidity and dexterity that neither themselves nor their

clothes are burnt or even singed. This performance is no doubt of Egyptian or Phœnician origin, and is very similar to the rites observed in the worship of Adonis; the passage through the fire is suggestive of one of the idolatrous customs of the Kings of Judah, who made their children to "pass through the fire to Moloch."

Another superstition, or prevalent belief, in many parts of the Island, is the miraculous power of certain bags or purses, called "las spungas". They are said to contain the bones of Saints and other holy relics, and any person who swears falsely, when touching them, will meet with present as well as eternal punishment. It is customary for those defrauded to challenge the suspected parties, and compel them to swear on the "Spungas"; if they do, and escape, it is a proof of innocence; if they refuse, it is evidence of guilt.

For the information of medical practitioners, it should be mentioned that in cases of brain fever, a certain cure is to be found in the placing of a plucked live fowl on the head of the invalid, and leaving it there till it decomposes.

Another superstition belief or custom, principally confined to the Barbagia district, is the "Timoria," a violent panic or nervous trembling, with utter prostration of strength and spirits, no doubt arising from intemperie or malarious fever. It is not however attributed to natural causes, but is considered a distinct malady produced by some person or other, whom the patient points out, and this person is waited upon by the friends of the patient, and a cup full of his saliva is obtained, which is diluted with wine or broth, and the patient partakes of this disgusting compound with the full conviction of instant cure.

A similar superstition exists in Sicily, but there, instead of the *Sarde nostrum*, certain herbs supposed to possess magic charms, or broth made from a puppy dog boiled down, are given to the patient. The efficacy of either of these doses must arise from the disgust and nausea in taking them, or the imagination must be able to produce a wonderful effect.

One of the most prized and highly venerated relics is at Al-

-ghero, and is a skull of one of the Innocents murdered by Herod. A document giving its history is among the sacred archives of the church, and every detail is elaborately given, nothing in fact is wanting, except some sort of evidence proving its authenticity. The skull is undoubtedly that of a child, who had received a blow on the head when very young, but the same indentation might without difficulty be produced upon the head of any ordinary infant.

Several of the mineral springs in Sardinia are supposed to possess extensive and miraculous virtues besides the curing of diseases, but this credulity, though handed down by tradition from ancient times, is gradually dying out. Solinus mentions two fountains which had the property of discovering theft and perjury. If the accused were guilty, on bathing his eyes with the water, he was struck with immediate blindness, — but if innocent, no bad result ensued.

Another singular but unpleasant custom is said to have once existed in the Island, viz “accabatura,” a Sarde word signifying “knocking on the head,” and it was practised in ancient times in many parts of the Island, and consisted in parents being released from their miseries, when they became very old and infirm, by the simple process which the name of the custom denotes. The children did not perform this terrible office themselves, but intrusted it to a set of men called “Accabature,” who were professionally employed for the purpose. The Sardes of the present day doubt whether the custom ever really existed, but it is mentioned by Zenodotus and Æschylus and is said to have been practised at Bosa in the middle of the last century. It is a custom which it need scarcely be said, is not now practised; and it is certainly one of those customs that may be said to be “more honoured in the breach than in the observance.”

The Tarantula, called in Sarde “arza,” or “argia,” is found in the Island, and is of three sorts, distinguished as “the Maiden,” “the wife,” and “the widow,” no mention is made of the “males,” though doubtless they exist, but perhaps they don't bite, and are not therefore held worthy of record. The first named female is

marked with small red spots, the second has spots of greyish colour, and the third is entirely black. Their bite is said to be poisonous the person bitten being seized with cold shivering and fainting fits, and having a pulse varying in quickness according to the religious fervour of the individual. The utmost care is taken to catch the insect, as, according to whether it was maid wife or widow who inflicted the bite, the patient is treated. A round dance is then formed, during which the patient executes a continuous "pas seul", and this dose is administered three times a day till a cure is effected. In other parts of the Island a very different and much less pleasant remedy is resorted to. The patient is buried up to his neck in a manure heap, and is kept there for several hours, while the fair sex soothe him with dance and song, mingled with the clash and twang of sheep bells. The virtue of both these remedies is doubtless the extreme perspiration which is produced, and as the tarantula bites only in the dog days, it would be difficult to invent stronger sudorifics than violent dancing three times a day till one drops, or being immured up to the neck in heated manure. Death is said to have resulted from the bite in several instances, but there does not appear to be any well authenticated case.

These dances gave origin to the "Tarantella", which however is not danced in the Island, though not uncommon on the Italian mainland.

The proverbial and world-wide expression "Sardonic Grin" is of great antiquity, but it is not generally known, though from its verbal similarity it might have suggested itself, that it had its origin in Sardinia; it is thus described by Pausanias, who says: "The island of Sardinia is free from all poisonous herbs excepting one, which resembles parsley, and which, they say, causes those who eat it to die laughing." The phrase is first used by Homer, and after him, Plato, Virgil, Cicero, and other ancient classical writers, describe laughter, which conceals some noxious design, or mocking sarcasm, a "Sardonic Grin".

Æschylus and some other ancient authors however attribute the

origin of the expression to the old Sardinian custom of "accabatura," as the old people, who were receiving their "coup de grâce" under that practice, died with a smile and in apparent contentment, although in reality helpless, and suffering martyrdom.

Anores di Laguna in his commentary on the passage in which Dioscorides enters fully into the remedies to be applied when this poisonous plant has been eaten, says: "Drunkenness is an excellent remedy, therefore it is necessary to give the patients a great quantity of wine, so that they may sleep for a long time."

This prescription has a wonderful similarity to the remedy invariably resorted to by "Cowboys," on the cattle ranches in the Western States of America, who, when bitten by a rattlesnake or tarantula (the one is quite as deadly as the other) ride off, as fast as their mustangs can carry them, to the nearest "store," where whiskey or brandy can be had, and there drink the spirit "raw and neat," until they become completely intoxicated. Their blood is thus (so it is stated and assumed) raised to such a heat as to prevent coagulation, and the poison is thrown off before it has entered into the system.

Whether the Alcohol has really this effect, and whether the prevention of coagulation would neutralize the fatal consequences of the poison, I do not profess to offer any opinion; but of the actual fact, that many persons, after being bitten, and after having partaken freely of this remedy, have recovered, there is no doubt, and abundant evidence of this could be given.

It has often suggested itself, whether the same remedy would not be equally efficacious in the case of a bite from a mad dog; and as there is no known cure for hydrophobia, it is well worthy of serious consideration by members of the medical profession, as to whether it would not be desirable, in the interests of science and humanity, to make the experiment; seeing that no effect could possibly result worse than the horrible and certain death, which now invariably ends the victim's sufferings.

The catalogue of ceremonies customs and superstitions might be

almost indefinitely extended, but sufficient has been given to illustrate their general character and tendency. Some of them no doubt have their origin long before the Christian era, and were in honour of some heathen idol, but the connection with idolatry is now entirely lost sight of; others flesh had their origin in the earliest times of Christianity, when some of its rites were blended, as a matter of policy, with festivities in accord with the national habits of the converts, and sometimes with an alloy of pagan usages, as a concession to the weakness of neophytes among semibarbarous peoples. Our own village wakes and fairs, with their flags and green bonghs, and cakes and ale, originally held in the precincts of the church on the feast day of the Patron Saint, partook of the same character as many of these Sardinian festivals; but with us every trace of religious or superstitious element has been long extinct; they are simply gala-days devoted to amusement and recreation, and as such are looked forward to by young and old with that intense appreciation, which those only, who have few pleasures to change the unbroken monotony of their daily labour, can realize, and are marked as epochs in an otherwise most un-eventful existence.

CHAPTER XII.

Sporting — Game — Moufflon — Red-Deer — Fallow Deer — Wild-Boar — Hares — Rabbits — Bustards — Partridges — Patro Ruale — Woodcock — Quail — Snipe — Wildduck — Wild Geese — Eagles — Hawks — Vultures — Flamingoes — Caccia grossa — Campagna shooting and Coast shooting — Trout and River Fishing.

Game of many varieties of "fur and feather," is to be met with in Sardinia, but neither kind can be said to be "abundant," though so described in *Mediterranean Guide Books*, and if any "sporting," Englishman should be induced to pay the Island a visit with the sole object of "slaughter," under the impression that he will find game "abundant," or in such abundance as it is to be found in the preserved grounds of his own country, he will be grievously disappointed. To the *sportsman*, however, who combines with the love of sport the love nature, whose pleasure does not consist solely in the variety of his *bag* and the extent of his *slaughter*, but who delights in seeing his dogs work, and is not afraid to work himself, and who can at the same time admire the varied beauties of nature, which he will find profusely scattered around him, there is unlimited scope for ample enjoyment, but "chacun à son goût," and after being made acquainted with the *actual* resources of the country as to the variety of game and amount of sport to be expected, let each decide for himself, and then he will not be disappointed.

Game in Sardinia may be divided into 2 Classes.

1st What may be called "Big Game," which comprise the moufflon, the red-deer, the fallow-deer, and the wild-boar.

2nd The smaller game consisting of hares, rabbits, partridges and a bird called "Patro Ruale," (peculiar to the Island remaining there the whole year); and birds of passage, including woodcock, quail, snipe, plover, bustard, wild geese, wild swans, and wild-duck of almost every kind and variety.

I do not class in the category of game many animals, such as foxes martens, weasels, flamingoes, vultures, eagles, and kawks, nor pigeons, blackbirds, thrushes, starlings, larks, and many smaller birds, which Italian and French sporting writers dignify with the name of game, and consider legitimate objects of "sport." Our insular opinions are different, and no English "sportsman," at all events would ever come to Sardinia for the purpose of killing them.

The Moufflon (*Caprovis musimon*) has more the appearance of a wild sheep, than of any other animal, though it possesses many points of resemblance to the deer, and yet, in its anatomical formation, it presents many points of difference from both. The head horns and body are like those of the sheep, but the head is more broad and square, the horns are thicker, rougher, larger, and more voluted, and, though standing higher than the sheep, the body is thinner and longer. Its cry too closely resembles the bleating of a sheep. On the other hand, the texture of its coat, instead of being woolly, is like that of the deer, the hair being short and bristly, of a dully brown colour, and white towards the lower parts of the body. The tail legs and hoof resemble those of the deer, but it has not the same long black stripe down the back, nor does it shed its horns in the spring like the deer tribe.

For its size, the Moufflon is the strongest and most active of animals, but they seldom attack their human foes, except when wounded; they have however violent conflicts with one another, and during the months of October and November, though not so



Moufflon.

fiercely pugnacious as stags at that season, yet to approach them is not unaccompanied with danger.

The Moufflon produce their young (generally only one, though there are occasionally two) in April and May; during the period of gestation and while the young remain with their mother, the males herd together in flocks of 8 or 10, and apart from the females, but at no great distance from them, and always on the watch for their protection.

The best months for "hunting" the Moufflon are July, August, September, and October, and though by law the close time extends from November till June, the law has little force in the mountain ranges which these animals inhabit, and they are shot indiscriminately, and with impunity all the year round.

The usual mode of hunting the Moufflon is "driving," with dogs and beaters, the same as for deer and wild-boar; the "hunters," being stationed at passes in the mountains, which the animals are known, or are most likely, to take; or if there be no such "posts," then the side of the mountain is "lined," with rifles, about 150 yards apart.

Though driving is the usual, and indeed it may almost be said the only, mode of killing the Moufflon ever practised in Sardinia, yet from the nature of the ground they frequent, they might and ought to be "stalked," after the manner of red deer in Scotland. The opportunity of making the attempt unfortunately did not present itself, but any Englishman coming out here for "sport," should devote his attention to this, and not forget his telescope and compass, for without these he will be "nowhere." This mode of killing your "quarry," would be far more satisfactory than driving, as success would depend on the exercise of your own skill knowledge and endurance, and you can select your own victim — the patriarch of the mountain — and you are free from that social pressure and noisy hilarity of the "Caccia Grossa," which, as a novelty, is gratifying and interesting to the stranger, but which to the sportsman would become intolerable as a permanent institution.

The " Gennargentu " range of mountains — the highest in the Island, — is the most frequented by Moufflon, and there the best sport is to be had; but they are also met with in the mountain districts of the North and South West. In the Summer and early Autumn they are to be found amongst the rocks *above* the " Forest " line (i. e. about 4000^{ft} above the sea level) but as the snow falls, they descend to the lower ranges, for the sake of the shelter which the forests afford.

They are gregarious, sometimes as many as 30 or 40 are seen in one " flock ", and seldom fewer than 5 or 6. They are at all times difficult to approach, not only from the steep rugged inaccessible nature of the ground where they feed and rest, but from the extreme vigilance which they incessantly display, one of their number always acting as " sentry ". Their power of vision is extraordinary, extending it is said so far as to be able to identify clearly objects between two and three miles distant, but their senses of smell and hearing are not so acute as those of the deer and wild boar. There is a Sarde sporting proverb, in the form of a dialogue between the stag, the moufflon, and the wild boar, which well illustrates the keenness of the different senses the three animals possess, and which I give in the original language, with a literal translation.

Cervo — Avete udito il rumore di un capello che è caduto a un cacciatore?

Moufflon — No, non l'ho udito, ho visto il capello mentre cadeva.

Cinghiale. — Non ho udito nè visto il capello, però ho sentito l'odore.

The Stag. — Did you hear the noise of the hair which has just fallen from the head of the hunter?

The Monflon. — No, I did not hear it, but I saw it when it was falling.

The Wild Boar. — I neither heard nor saw it, but I smelt it as it fell.

The flesh of the Moufflon is considered a great delicacy; its

taste is something between the mountain sheep, and the red deer more "gamy," than the former, but not so decided as, and more tender than the latter.

Cetti — the recognized authority on all Sardinian matters of natural history — in his book "*I quadrupedi di Sardegna*," enters into a long dissertation about the moufflon, and his differences of opinion with other writers, which it would not be interesting to discuss. There can however be no doubt that the animal is indigenous to this Island and to Corsica, and is not found in any other country.

Pliny mentions it as peculiar to Sardinia and considers it the same animal as the "*ophimon*," or "*musimon*," of the ancients.

Red deer (*cervus elaphus*) are not very numerous in the Island, and now are found only in the large and more secluded forests, and, though they occasionally frequent the higher ranges, they are seldom to be met with above an altitude of 3000 feet. The invariable mode of shooting them is "driving," though there are some forests, with wide open spaces without trees or with trees far apart, where they might and ought to be "stalked," and yet, it is very strange that I never, in my various non-hunting expeditions through forests, ever saw a red deer, either feeding or lying down in the open, and the fair inference is, that they spend their days in the thickets, venturing out only during the night for pasture and water.

These deer are precisely the same in appearance as, but rather less in size than, the Scotch Highland deer, though larger than the small beasts found in the Lewis, Harris, and the outer Hebrides generally,

The heaviest stag I saw killed in Sardinia was a little over 100 kilos, equal to about 14st 9^{lb}. This, however, was considered to be an exceptionally fine animal; the average weight would not exceed 12 stone.

The horns too, are neither so long nor so thick, nor so rough, nor is the width of "beam," so extended, as on the Scotch "heads."

In the various collections of horns, (for the heads are not stuffed, as is usually done in England, the horns and skulls only

being preserved) in different parts of the Island, I never saw a perfect "Royal", though there were many with ten "points", and with the "cup", on each antler.

Hinds "drop", their calves at the end of March or early in April, and towards the end of June the stags have shed their velvet, and the horns are "clean", and hard.

Cetti estimates that 3000 red-deer are shot annually in the Island, this, however, must be a mistake or an exaggeration; from what I saw and heard, 300 would be much nearer the true number.

Some interesting "crosses", between moufflon and red-deer have been made by M. Piercy on his estate at Macomer, where several of each kind are kept in confinement.

The first cross was between the moufflon and a "hind", and the produce in size, shape, colour, coat, and general appearance, is more like the "sire", than the "dam.". It has no black stripe down the back, and has short pricked ears, and, though darker generally than the deer, yet is white in colour under the body, on the face and muzzle, and round the tail; it has also a dark stripe down the fore-leg to the knee, and, what is most singular, on one side of the head is a stump of a horn, resembling the horn of the red-deer, and on the other side the horn is like that of the moufflon. Other crosses are being tried, and the results will be watched with much interest.

On a small Island in the Gulph of Aranci, off Terra Nova, sheep and moufflon are herded together, and it is said that they also have "crossed", but I had no opportunity of inspecting them, nor have they yet been sufficiently long on the Island to draw any conclusion as to what the results will be. The experiment however cannot fail to be highly interesting.

The Capriolo or Daino (*Daino vulgaris*) is not the roebuck, as generally supposed, but the common fallow deer, having the same shape and size, the same coloured and spotted skin, the same body marks, and the same palmated horns.

The lower ranges of forest are their favourite haunts, though they are sometimes found with the red deer; indeed both animals are occasionally shot in the same "drive."

The average weight of the Daino is 60 kilos or rather over 8 stone, which is nearly double the weight of a roebuck, and fully equal to our park fallow deer, though not of course equal in weight to the "stall-fed," animals.

They shed their horns, and breed, the same as red-deer.

The flesh of the deer (both red and fallow) is much appreciated; it is finer and more tender than our deer, and the meat of either when cooked is undistinguishable one from the other.

The horns of the fallow deer are in some districts steeped in hot water till soft, and then fashioned into soles for dancing pumps, so that in their favourite dance (*ballo tondo*) they may make a clatter, something like that made by the wooden clogs used in Lancashire and Yorkshire, when a reel or a hornpipe is being danced.

Wild-boar or *Cinghiale* (*Sus crofa*) are by far the most numerous among "the Big Game," of the Island, and are to be found in almost every district. They not only frequent the forests and high mountains, but are also to be found on the lower grounds, and in the *campagna*, wherever the "scrub," or bushes will give them shelter. They breed 3 times in the year; the "litters," vary from 4 to 7 in number.

The weight of a good sized full-grown *cinghiale* (*maschio*) is about the same as a good sized stag, but they are much fatter, and, during the acorn and chesunt season, the flesh has a delicate flavour which is delicious. In "driving," the male and female are shot indiscriminately; but no sportsman ever shoots a hind or fallow doe. As compared with wildboar, both fallow and red deer are comparatively scarce in the Island.

The hare, (*Lepre* in Sarde language) is very similar to our lowland hare, but rather darker in colour, and rather smaller in size, weighing on an average about 5 lbs; they breed several times a year, and generally produce two leverets. They are found in the

enclosed lands, as well as in the forests and on the mountains, when driving for big game, and they are also shot "over dogs," in the open, and on the campagna, when shooting quails and partridges; they are too coursed by lurchers, and, where the ground is favourable for riding, afford excellent sport. The "dogs," though rather like a rough greyhound in appearance, are not true-bred, and when they lose sight of the hare, they put their noses to the ground, and hunt by scent.

Rabbits are not very numerous on the Island; they are to be found on the campagna, on the light sandy soils, and on the lower hills, amongst the rocks. From the apparent suitability of soil and climate, it would naturally be supposed that they would increase rapidly, so as to become, as in many other countries, an agricultural nuisance, and be treated as vermin; but from some cause or other, they do not multiply, and their scarcity is attributed to foxes, which no doubt do exist in surprising numbers, and rabbits are their favorite food. They are shot in the open, and also ferreted and netted. They breed several times in the year and have a numerous progeny on each occasion.

Partridges (*caccatis rufa*) abound in all the low-lying grounds, and on the sides of the lower hills, and they are found occasionally in the forests. It is the French or red-legged breed; they "pair," in April and make their nests, (which contain from 8 to 12 eggs) in the scrub or rough grass. They are "fit," to shoot in July, but the close time does not end till August. When first "flushed," they sometimes rise together, but often in twos and threes, and their flight seldom extends beyond 150 yards; later in the season however they become as wild as they are in England. "Driving," partridges is not known as a sport in Sardinia, they are shot "over," pointers or spaniels.

The rock partridge ("Perdrix gamba,") is, according to Cetti and La Marmora, to be found in some parts of the Island, but I never saw, nor met with any sportsman who had ever seen, any of them, and if they ever existed they must have become extinct. According

to the same authorities wild horses and wild goats are also to be met with, and no doubt there are animals of both breeds wild enough, but not "ferae naturae".

The "Patro Ruale" is a grand-looking game-bird about the size of a pheasant and having the mixed plumage of the grey-hen and the ptarmigan. They frequent the Campidano and the higher Campagna plains and are generally seen in flocks of from 20 to 30; very little appears to be known as to their habits. They breed in early summer, having "paired" soon after Christmas, and there are from 6 to 8 eggs in each nest. It is said that they are peculiar to Sardinia, but very little information was to be "gleaned" about them. La Marmora mentions a bird which he calls "la brillante" "poule sultane (le Porphyryon des anciens)", and adds "j'en ai chassé plusieurs et possédé une en vie," but he gives no description of the bird, and whether it is the "patro ruale" or some other is left in doubt.

Woodcock (*Colossan rusincola*) arrive in November and stay in the island till April. They frequent the scrub lands, and lower forests, and are mostly to be found near springs and soft ground, as in England. It is popularly supposed that they come from Holland and the Low Countries, and proceed from Sardinia to Africa. A good day's sport, with the aid of a couple of beaters and a spaniel would be from 30 to 40 "cock."

Of snipe there are three sorts — the jack (*gallinago gallinagu*) the full (*gallinago medio*) and the solitary (*gallinago major*) — none of which (except the jack) breed in Island. They make their appearance early in October, and stay till February, when they take their departure northwards, having come, it is supposed, from the south. They frequent the marshy plains, but are occasionally to be found in the forests. The "Solitary" are very rarely met with, and the "Jack", are not numerous, but the "full" are found in great numbers, as many as 10 or 12 being often on the wing at the same time. A good shot on a favourable day may bag from 30 to 40 couple, of which probably there will be one "solitary", three "Jack", and the rest "full".

Quails (quaglia) breed in the lower parts of the Island in the months of May and June, and many of them migrate southwards in the latter end of November or early in December, but some few remain in the Island. They are found on the same ground as partridges and in "bevys", of from 8 to 14. About 30 Quails with half as many partridges and a couple of hares, will be a fair day's sport early in the season for one gun.

Wild duck are by far the most numerous of the birds of passage, and afford the best sport. It is said that there are altogether 70 different varieties, and it is not at all unusual to find 8 or 10 different sorts in the game-bag at the close of an average day's sport. Some few breed in the Island but the great flocks come from the North, arriving in November and departing in March. Their favourite places of resort are on the stagni or salt water lakes, where they are to be seen in thousands, but they are scattered all over the Island, wherever there is a river or marsh to be met with.

The most common are the mallard (*anas boschos*), the sheldrake, the widgeon, the teal, the black and white duck, and the common black duck, all of which give fair sport, and are good eating.

On the Stagni a punt is essential, unless you are prepared to wade in about four feet of water all day long, (which is not very safe for Sardinia *even* in winter) and a retriever also is necessary; an ordinary gun charged with N.^o 2 shot is "sufficient"; about 50 duck of all sorts would be a fair day's sport.

Wild geese come in November and stay till March. They are however not numerous and are difficult to find; wild swans are still more rare.

A license to shoot from Government is necessary, and is granted to every one, on payment of ten shillings, and no other qualification is required. If found carrying a gun without a license you are fined, and liable to imprisonment. The Sardes, generally, are keen sportsmen, and good shots; very few licenses are granted to foreigners. I could only hear of one Englishman, who had come to the Island

last year for sport; and he kept very quiet, apparently not liking interference, or wishing for companionship.

There are however several "professionals," from the mainland, who make a profitable business of shooting in most seasons, but the quarantine stopped them last year. They sell their game each day, whatever the bag consists of, and it is sent off in boxes to dealers on the mainland; the prices are reasonable, partridges 50^c, woodcock 60^c, snipe 30^c, hares 2 lire, and wildduck 60^c.

The earnings of a "good" professional will average from 20 to 30 lire a day. They stay till April, when they migrate with the birds of passage.

The gun generally used in the Island is N.º 15 central fire double-barreled breach-loader of Italian manufacture; those made at Brescia being the most common. The price is most reasonable from 50 to 120 lire according to weight and workmanship. It is a handy serviceable weapon, and does the double duty of gun and rifle; ball or more generally "slugs," in one barrel, and shot in the other. The usual "charge," is 2 1/2 drachms of powder and 1 oz of shot or slugs.

German powder is the cheapest and strongest, but it fouls the gun, and English powder, though rather dearer, is preferred.

No game-book, or written record of sport, such as is usually kept in England, is, or ever was, so far as I could ascertain, kept by any "cacciatore," in the Island, and wherever I stayed or sported, I never omitted to inquire; it is therefore impossible to give any *exact* statistics of the numbers and varieties of game annually "slaughtered." On several occasions, however I was able to obtain from the Proprietors, or "capo guardia forestale," (head game-keeper), approximate particulars, and the results were surprising, being so much less both in numbers and variety, than I should have supposed. The most favourable returns on one of the best sporting estates, situated in the centre of the island, where the land all around for many miles is the exclusive property of the noble Marquis who furnished the details, and who is himself the keenest of sportsmen

— out in the forests, on the mountains, or in the plains, almost every day of his life, — and a strict “preserver,” in so far as having a retinue of foresters and labourers, who appear to do nothing else except look after the woods and game, and in a district too where almost every inhabitant is either a tenant or in some way dependent on him — are as follows, taking an average of seasons, viz.

Moufflon 5, red deer 10, fallow deer 40, wild boar 85, partridges 500, hares 150, rabbits 300, woodcock 160, snipe 125, wild duck 100, quail 50, plover 30, bustards 5; a total of 1560 head.

This cannot be said to be excessive sport — considering the extent and variety of ground shot over and the large establishment kept up — and indeed when it is further known that the noble proprietor has a succession of sporting guests always staying at the castle, and is invariably accompanied on all “caccia grossas,” by at least half a dozen neighbouring proprietors, the “record,” must be looked upon as somewhat meagre and disappointing. It will not equal in numbers half a day’s “sport,” recorded in many an English game-book, and *in variety and weight* it would not equal an average day of a seasons sport in India as recorded in the game book of one of our “crack shots,” recently returned from that “Paradise of sport,” and yet I venture to think, that if this same sportsman — steeped though he has been since his earliest days in the slaughter of wild animals in wholesale fashion — would, from the novelty and change of scene and sport, enjoy a short visit to Sardinia, and bring back pleasing recollections.

The description of a day’s shooting of the various sorts that are to be had in Island will perhaps convey the best idea of the actual sport that may be expected; the first was a “drive,” in some extensive forests near the centre of the Island; the second was a day in “the open,” on the Campidano, and the third was “general,” shooting among some islands on the Western Coast.

The “meet,” for the “caccia grossa,” was at 5 a. m. in the castle yard; and before the appointed hour (the Sardes are early risers) we found already assembled a motley group of horsemen,

all clothed in the roughest attire, and half-smothered on their horses with their capotes wine-gourds and game-bags, and with their rifles slung over their shoulders, and large knives in their girdles. Each "cacciatore" was accompanied by an attendant, who was also on horseback, and similarly attired and equipped, and altogether they presented a strange and rather formidable looking army, and would number (all told) between 30 and 40 horsemen.

The head Cacciatore, or chief huntsman for the day, was the noble Marquis who owned the castle where we met, and whose forests we were about to hunt, and a better "all round" sportsman is not to be found in any country.

Every Cacciatore was accompanied by one or more dogs, and together they formed a strange pack, indeed every dog in the district, from the large shaggy deer-hound to the toy-terrier, seemed to have joined the congress. Each dog too, according to its owner's version, had a wonderful history attached, and was *the best* dog of its kind that was ever bred, but its special qualifications were exactly the reverse from what would have expected from its breed and appearance. Pointers were praised for running in on their game; setters for their fierceness in attack; the mastiff for his patience and steadiness; the deer-hound for his "scent;" and the tail-less mongrel for the union of every good quality possessed by them all.

On the first start a sort of civil war commenced, and lasted, more or less, during the ride to the forest which occupied about two hours; and indeed it was not until game was on foot, and all their energies were concentrated into a common cause, that a truce for the day was established.

On arrival at the forest the chief huntsman, having placed the cacciatori in positions commanding the various "runs," or "passes," of the wild-boar red-deer and capriole, silence and concealment were rigidly impressed and enforced. The beaters, with all the dogs, had meanwhile been sent a couple of miles up the valley, and were then formed into line on the side of the mountain, and

in this form they struggled on through the scrub and tangle, shouting, and throwing stones, and encouraging the dogs, so as to drive the game before them towards the passes. Several wild-boar were soon "afoot," and, before the beaters had "made good," half the length of the drive, a good-sized stag and some fallow-deer were seen making their way towards the passes; every hound was giving tongue and following on their tracks, each independently with his own note, and after his own fashion. The sport so continued till midday, when a couple of hours were devoted to colazione, and at that time the bag consisted of four wild-boar, a stag, and two "capriole," besides several hares and some hawks.

A fire was soon kindled, and one of the boars was roasted, which, with cold fowls and salad, bread and cheese, and wine and fruit, contributed by the various cacciatori, and produced from the inexhaustible saddle bags, formed no contemptible repast, after eight hours riding and shooting. In the afternoon at two o'clock "sport" was resumed, and was continued till dusk, by which time the bag had been increased by two more wild-boars, another capriole, and other smaller game.

On halting, whether at mid-day or evening, the place selected should always be near a stream or fountain; the horses first receive attention, and, after the saddles and baggage have been taken off, they are turned loose for grazing — those not very docile and well taught being tethered for safety with the ropes, which, with many straps, form part of the "tackling" of every sportsman. — Fire-wood, (*cistus* *arbutus* myrtle and thyme are best, as they give a delicious flavour to the meat) are then cut and collected and set fire to, and the live ashes are piled into a heap about eighteen inches high and two feet square, with a stone at each corner to support the horizontal poles on which the meat is spitted. In the meanwhile others of the party prepare the wild-boar or other selected animal, which, after being cut up and washed, is handed over to another detachment told off for cooking, and is divided into pieces and skewered on the horizontal poles, resting on the side stones of the fire, which are

periodically turned, the process being occasionally varied by changing sides and position, so that every part may be well roasted.

The wine is cooled by placing the bottles and gourds in the stream, and as each "cacciatore" contributes from his own store, every variety of wine grown in the district is represented, and pressed upon your acceptance; so that the meal is really a feast, and the man who would not be satisfied with such fare must be hard to please, and should never venture into a Sardinian forest.

The Sardes are very expert in the use of the long large knife, which they invariably carry about with them; it serves not only as an axe for felling wood, but for cutting up the meat for roasting, and afterwards as a carving weapon, and eventually as an eating knife.

On some occasions when the shooting party is large, the animal, whether wild boar deer or capriole, is roasted whole, being of course first "gralloched," and skinned. A large hole is made in the ground, stakes are driven in to keep the sides up, and other stakes laid at the bottom to keep the meat from contact with the earth; a trench is then dug round the hole, leaving an internal wall of about 6 inches of soil. A bonfire of wood and shrubs is then made, the live ashes are raked into the trench, and this process is continuously repeated until the animal is baked.

Shooting in the open on the Campidano is a very different affair. We started from the farm, where we were staying, at 6 A. M. after a break fast of hot coffee with bread and butter and eggs; we were accompanied by an old Sarde sportsman, who *of course* had his gun with him, as well as a dog, the latter a small cross-bred brown English spaniel, with a history attached to it, that was perfectly marvellous even in canine mythology, and with a stump of a tail that never ceased wagging the whole day. We were followed by another man with a pony, which was equipped with the irrepres-sible sack containing ammunition and luncheon, and a spare compartment for the game that we were expected to account for.

On arriving at our ground an extensive scrubby plain on the

Campidano, we were fortunate in seeing a flock of "Patro Ruale", feeding and strutting about, on some rough ground, and as we approached near (keeping the dog back) they rose, with a curious whistling noise, rather wild, but we managed to "bring down", two of them. The rest took a long flight, but we "marked", them amongst some rocks, and then commenced to "stalk". A circuit of about half a mile, round some rising ground of which we took advantage, brought us close to the place where they had "lit", but, on cautiously shewing ourselves, they got up nearly 300 yards off, having no doubt "run", that distance after "lighting". Their second flight was much longer than the first, and as they were on a bare exposed plot of table land, and were evidently "scared", and did not intend to let us approach again within shot, we turned our attention to other game.

The indefatigable spaniel soon came across a covey of partridges which he *of course* "flushed", but they "settled down", after a short flight, in some "Lentiscus", bushes, where they rose in ones, and twos, and threes, and we succeeded in bagging five of the eleven which composed the lot, as well as an old hare, who was stealing gently away, when she heard the shooting. We then made for some swampy ground, or the side of a small stream, an almost certain find — so the old man said — for duck and snipe, the former however were "not at home", but a "wisp", of "full", snipe, were soon on the wing out of which we managed "bring down", three; one of us having "cleverly", missed with his second barrel.

After this, we "ranged", for some time, seeing nothing and no "indication", of anything, but at last, when we were of course unprepared, up sprang from some bare ground, almost at our feet a fine covey of birds, of which my companion bagged one. They took a long flight, but we followed on their track, and very soon came to where they had settled, having picked up a hare, a cock and two rabbits on our way (the spaniel caught one); some very "pretty" shooting, then began, the birds rising singly, and out of a covey

of fourteen only three escaped. Here too we found a "bevy," of quail, and succeeded in killing four.

It was now nearly mid-day and we were getting tired and hungry and the pony with the sack being within hailing distance, we determined to rest and eat, and were soon seated on the lee-side of a stone wall, with a spring of fresh cold water close by.

Colazione is a serious affair in Sardinia — wherever it is taken — whether in castle or cottage or "al fresco." It is in fact the meal of the day, and occupies, with interludes of smoking and slumbering from two to three hours, and it was three o'clock before we recommenced operations. The afternoon was to be devoted to wood-cock snipe and wild duck shooting, and our destination was a large stagno or swamp, surrounded by scrub, and much frequented by duck and snipe; and though rather early in the season yet we were not disappointed, and an hour before sunset, when we started homewards we had increased our bag by eleven duck six wood-cock and fifteen snipe, making the total of our days sport two *Patro ruale*, seventeen partridges, four quail, eleven ducks, seven wood-cock, eighteen snipe, three hares, and two rabbits; an aggregate far above the average for Sardinia, and not to be despised in any country.

On our walk from the stagni to the high road, the "little dog," stood at some thick scrub, and we expected partridges, but as nothing rose, our Sarde companion, who had more confidence in his dog than in any human being, followed into the thicket, and there found quite dead, and half-buried with earth, a hare, which he was convinced was an animal he had shot at in the morning, and which the spaniel had followed, seeing it was hard hit, but, being unable to "carry," had hid it in the bush, and marked the spot. If this be so, it is one of the those extraordinary instances of sagacity in a spaniel that are often heard of, but seldom witnessed; most extraordinary stories were however narrated of that dog by his fond master, which required great command of countenance not to shew unbelief in, and would have required still greater credulity to have believed; but the dog and his master were both good in

their ways, and I would gladly compromise never to be worse accompanied on a sporting expedition, than by two such companions.

Another and very different day's sport, but quite as varied and enjoyable, was that "after," wild fowl in the south of the Island on the west coast. I was accompanied by three Sardes and two fishermen, or rather fisher-lads (for they were not above 14 years of age), and our object was to shoot pigeons ("blue rocks,") which frequent the caves and grottoes along the shore in great numbers, and to visit an island famous for its wild fowl, and to have some sea fishing "en route."

We left port towards evening in an English made-boat, lent to us by a friend, and sailed along the coast with an easy breeze "dead aft," and at about 5 o'clock in the morning we arrived at the "colombaio," which was a large cave or grotto in the cliffs where, blue-rocks breed in thousands. The first operation was to stretch a net across the entrance of the cave, then one of the Sardes let off his gun, and out came the pigeons in crowds, 29 were caught entangled in the net, and others flew out at a small opening not covered by the net, and afforded some good shooting. One of the lads afterwards crawled into the cave, and then the birds came out singly, flying past like lightning, and very difficult to shoot, but altogether we managed to bring down eighteen which, with the netted lot, made a total of 47 — not a bad morning's start — After a plunge bath in the sea, which was delightful and refreshing, in which my Sarde companions participated, but which the lads altogether shirked, an extemporized breakfast, consisting of coffee and eggs, and bread and butter, supplemented by roast pigeons and fried fish, was prepared and proved a most excellent repast, which was duly appreciated.

Our next object was a small Island, about three miles to the South, which wild fowl of infinite varieties were supposed to frequent, and which was seldom visited by man. It was said to be inhabited entirely by wild fowl pigeons and rabbits, and we looked forward to great "sport." On our arrival there, we were greeted with such huge swarms of swifts and swallows, who shrieked and

whirled about in myriads, making us perfectly giddy and bewildered, that we almost determined to beat an immediate retreat; we however landed, but only succeeded in shooting a few ducks and some rabbits. The lad^s caught eight young wild fowl of various sorts, but no pigeons were visible, and we made only a short stay. We then steered our course for a well known grotto, on the mainland, nearly opposite the island. It is situate in a cleft between two precipitous walls of rock, almost perpendicular to the sea, and in some places the channel was very deep, and in others so shallow that we could scarcely get our boat over.

The number of pigeons was enormous, and, as they flew straight and quick down the ravine, they presented capital shots and between thirty and forty were soon added to our store in the bottom of the boat. We then ceased; indeed the report of the "shots," between the high narrow cliffs was so deafening, that we could not have continued shooting, had we been so disposed; moreover the sun was fast disappearing, and when we reached land at night, it was close upon 11 o'clock, which in Sardinia is considered, as indeed it is, much too long after sunset to be "out," with impunity; however, we were none of us any the worse for the trip, and were well contented with our day's amusement.

When sailing to the island and back we tried sea-fishing, with mackerel lines, some baited with "spinners," others with pieces of coloured cloth; we were not very successful, but caught enough "lupi," (a rather coarse fish, about the size of a mackerel, but not having the same delicate flavour) for breakfast and dinner, and had we persevered throughout the day we should no doubt have been more successful, as fish evidently "abounded," and were "taking," freely.

It should not be omitted to mention that after every "Caccia grossa," it is a universal custom in the Island to make a division of the "spoils of the chase," amongst those who have taken part in it. The head and skin belong as a matter of right to the cacciatore who "first struck," the animal, and in case of doubt the chief huntsman for the day decides this, as also any other question that

may arise. The best joints are then apportioned rateably, each sportsman receiving his share, irrespective of what had fallen to his rifle, and the inferior portions are divided amongst the attendants and beaters (*battatores*). Thus every person present has a direct interest in the result of each day's sport.

During Easter in most parts of the Island, a special "*caccia grossa*," takes place, at which sometimes as many as a hundred *cacciatori* attend, and the proceeds of the day's sport are presented to the Priest of the parish who distributes the gift amongst the clergy and poor people as he thinks fit.

Ladies on horse-back frequently take part in these hunting expeditions, and during the "*drives*," are stationed behind their male relatives or friends at the various passes, and take a most lively interest in the sport; they manage their horses with great skill and intrepidity surmounting obstacles and facing dangers which many men in other countries would "*funk*."

Eagles, Falcons and hawks are so numerous that the annual loss sustained by their depredations is considerable. Shepherds affirm that they have seen eagles, not only carrying away kids, lambs and young pigs, but occasionally making united attacks on heifers and foals; and that, after gorging themselves till they could scarcely fly, they leave the remains for the dogs, which are generally waiting their turn, and not daring to approach till the eagles have left.

The Eagles are of three kinds; the "*Falco Imperialis*," which is rare, but the Golden or Royal eagle is more common, and indeed, when in the forest, several pairs may generally be seen at the same time soaring and hunting together for prey. A small eagle — *not* the "*falco nevicus*," but a new species — which builds its nest in and frequents the marshy plains, was first seen about 40 years ago, it is now not uncommon, and the same bird has recently been found in some parts of Africa.

The vultures frequenting Sardinia are also of three sorts "*fulvus*," "*cinereus*," and "*barbatus*," — but the little vulture "*percenopterus*," so common in Egypt, is never seen in the Island.

The falcons kites and hawks are of many kinds, and a new variety to which the name of "Eleonora," in honor of the celebrated Guidessa of that name, has been given, has been recently discovered.

Pigeons abound, not only on the coast, on the rocks, and in the grottoes, but also in the forests and on the campagna; the most common are the "blue-rock," but the ringdove and wood-pigeon are also to be met with.

Blackbirds and thrushes are caught in great numbers in the autumn and winter at morning and evening twilight, by nets stretched across the gullies and vistas of the copses which the birds frequent. The birds when killed are immediately plucked, and strung together, and their necks and bodies rubbed with salt, after which they are wrapped in myrtle leaves, so as not to touch each other, and are then sent to market. Each net on an average will take annually 3000 birds, which fetch about 3 lire per 100 in the market.

There are very few small birds such as sparrows linnets and larks, so common in England, and their absence adds to the silence and desolation which are the pervading characteristics of Sardinian plains as well as forests.

Hedgehogs and squirrels are to be found in the Island — but they are not frequent. Badgers and moles are however never seen, indeed they appear to be unknown.

Hérons do not breed in Sardinia, but are birds of passage, arriving in the Autumn and leaving in Spring; they are of three sorts — "the great," "the little," and the grey, — Bitterns are occasionally met with, as also curlews, but they are not common.

The Flamingo, though not a "game bird," deserves special mention; rather larger than the heron, but similar in shape, the flamingo is of a beautiful light grey and bright crimson colour, and when seen in large flocks, lighted by the sun's rays, they present the appearance on the water of a fringe of crimson, and on the wing of a cloud of moving fire.

Amongst the Egyptians they are still held sacred to Isis, and by many ancient nations they were much esteemed as a great delicacy.

They are referred to in glowing terms by several classic writers Philostratus, Pliny, Svetonius, and Martial; Juvenal however describes it as one of the "foolish luxuries of the age," and the Sardes of the present day seem rather to share in this opinion; for, though these birds could be killed in large numbers, they are very seldom shot and never eaten; and the only use that is made of them is for the "pipes," of their Lanedda which are composed of the thigh bones.

They arrive in the Island about March and leave in September, taking a southern flight; their destination is supposed to be Africa, but it is not known. They congregate in flocks of from 200 to 1000, but it is said that as many as 200,000 have been seen on the wing at the same time. Some few hundreds remain throughout the year, and breed on the stagni and lagunes. The mode of building their nests and protecting their eggs is peculiar; the nest is composed of reeds shells, and mud, and is of a conical shape, and built in a position, where the water is about $2\frac{1}{2}$ feet deep (the exact length of the flamingo's legs) and they sit, or rather stand, astride these nests with their feet at the bottom of the stagni, and in this manner hatch their eggs and rear their young.

Their flight is in the shape of a wedge, like wild-geese, but nearer the ground and not so rapid.

On the sea shore in many parts of the Island, are to be found seals, which are of two kinds "monaco," and "vitutina,"; and turtles are also found off several of the smaller Islands. Tortoises and land turtles are occasionally met with; and zoophytes in infinite variety abound in most Sardinian waters.

Insects of all sorts are to be met with in the Island, but very few are noxious; they are mostly inoffensive, though some are inconvenient. Amongst the latter the mosquitos (Sanzarra) hold a conspicuous place. They, however, are much to be preferred to many of the insect tribe, as their attacks are frank and open, and made after fair warning; the attacks of others, which might be named, are insidious, and not even suspected till after the mischief is done.

Toads are not common, but frogs, especially the "green-tree,"

frogs, are frequent in some parts, and "sing," their monotonous songs all night. There are no "eatable," frogs in Sardinia, but, strange to say, they abound in Corsica, but this is perhaps because that Island belongs to the French, by whom they are most appreciated.

Fishing, in the sporting sense of the term, is practically unknown in Sardinia, indeed I do not believe there is such a thing as a fly or trolling rod to be had in the whole Island.

The only two freshwater fish that I have caught, or seen caught, are trout and eels; but it is said that in the river Tirso there is a fish called "Alose," a scale fish of delicate flavour, and, from the description given of it, not unlike the shad in size and taste. They are to be found as high up the river as Fordongianus — about 25 miles from the sea — but they abound most in the brackish water near the mouth. Trout are usually caught with small shackle nets, or by poisoning the streams with the leaves of a plant, which stupifies the fish and renders them an easy prey and yet does not affect their flavour. In some districts a small three-pronged spear is used by which the fish are struck either when resting at the bottom of the stream or when attracted to the surface by torch-light — a practice sometimes resorted to.

In several streams trout "run up," to 3 lbs in weight, and I have myself caught them, with an impromptu rod and worm, in some of the small mountain streams, weighing as much as 2 lbs. There can be no doubt that with proper appliances, either with artificial flies or small bait, very fair sport might be had. To the sportsman a day's fishing is an agreeable change from the monotony of shooting day after day, to say nothing of the change of diet which would at the same time be afforded.

Eels are caught in the rivers as well as in the stagni, but the former have the best flavour.

The Tunny Sardine and Anchovy fishing, and fishing for crabs and lobsters, scarcely come under the head of "sporting," and they are described amongst the trades and industries of the Island, to which they more properly belong.

In concluding the description of the "sport", to be had in Sardinia it should be mentioned that when our Channel Squadron was cruising off the Island about two years ago. H. R. H. The Duke of Edinburgh, the Vice Admiral in command, had a days shooting in the stagni near Cagliari, which is thus summarized in one of the sporting papers: "the party had fair sport, the bag "consisting of about 80 birds, of which more than half were shot "by his Royal highness who scored about 20 snipe, 10 coots and "some ducks ,

If this were really the "bag", of the Royal party, it would give but a faint and poor conception of what the Island can shew, in the way of sport, even on an ordinary way; and it is to be regretted that his Royal Highness, was recalled from Macomer by the urgency of professional engagements, as on the extensive and well preserved forests of Mr Piercy in that neighbourhood, more varied and characteristic sport would have been met with. It is to be hoped however that another and more favorable opportunity may present itself, when our Fleet next visits the Mediterranean, and when the political prospect which now over-shadow has been cleared of the dark clouds the continental horizon.

CHAPTER XIII.

Sarde characteristics — Social, Mental, and Physical — Sardinian ladies — Dress — Costumes — Manners and Customs — Theatres and Clubs — Servants — Horses and carriages — Courtship — Marriage — Child-birth — Funerals.

The Sardes in general may be described as honorable and intelligent, generous and hospitable, and as having most of the characteristics of a primitive and unsophisticated people. They are, however, as strong in their hatred as in their affections, but the members of the same family seldom quarrel amongst themselves; they concentrate all their feelings of animosity against those, who have wronged any friend or connection, and warmly espouse his cause, whether right or wrong, altogether irrespective of its merits.

They are passionately devoted to the chase, and the dance; and are not insensible to the pleasures of the table. Indeed the rules of hospitality are sometimes stretched to an extreme, and it is difficult to resist without offending; yet a refusal amounts almost to a breach of the rules of hospitality, which are held in the highest regard. In their religion, or rather in their observance of religious ceremonies, they are somewhat demonstrative and theatrical, but their earnestness may not on that account be the less real and sincere.

In temperament they are sensitive and naturally jealous, though they have less substantial cause for this latter feeling than exists in

many other countries. They attach themselves fondly to all domestic animals and especially to their horses, with whom they live on terms of close intimacy, often occupying adjoining apartments under the same roof; every villager keeps a horse or rather it "keeps itself," — for it is rarely fed and lives on what it can find in the nearest pasture; — yet the Sarde is devotedly attached to his horse, and to disparage it to his face is almost as dangerous as to praise his wife.

Politeness is one of the Sarde characteristics and is carried almost to an extreme. In the rural districts every one you meet, farmer or labourer, takes off this hat and wishes you "bona dies," and in the towns there is equal civility from those with whom there is even the slightest acquaintance, and sometimes even when you are a perfect stranger.

Cicero, in one of his orations, describes the Sardes as "pessimæ levissimæ et vanissimæ," (the worst the lightest and the vainest) and in another as "mastruccati latrunculi," (sheep-skin wearing thieves), and in the triumphal processions at Rome there was usually a representation of an old man on a white horse in a Sarde dress preceded by a herald, proclaiming "Sardi Venales".

No doubt, from their dogged demeanour and indomitable spirit, the Sardes did *not* make good slaves, and as such were held "cheap," in the market, and were almost unsaleable; but in estimating the weight to be attached to Cicero's "dicta," it must be borne in mind, that these strong adjectives were not intended to be taken literally as descriptive of the Sarde character, but were applied by way of simile to persons against whom the orator wished to excite the adverse feelings and prejudices of his audience. He was declaiming as an advocate, not writing as an historian.

The Sardes, though they may be said to be proud and somewhat obstinate, yet are not sullen; and this is characteristically evidenced in ancient times by their refusal under threats and heavy penalties to furnish to a Roman Consul certain supplies that were urgently needed, but which soon afterwards they offered spontaneously, and did in fact give, to Caius Gracchus himself.

They have great activity of mind as well as body, and are apt scholars in learning languages, and they can hold their own well in advocacy and argument; they are, too, poetically inclined, and though there are no great poets amongst them in the present day, yet there are many who write poetry fairly well, and some of them are wonderful improvisatori; they are not, however, good at abstruse sciences nor at any mental work, where close attention and application are necessary.

In naming hospitality as one of the most prominent traits in the Sarde character, it may be well to refer to an incident mentioned in one of Lord Nelson's letters, in order to correct a misapprehension that might otherwise remain. When stationed with his fleet off the Island of San Antioco in 1798, he writes, "It has pleased Almighty God to bring us to a safe Port, where, although we were refused the rights of humanity, yet the "Vanguard," will in two days be again ready for sea." This inhospitable reception was owing entirely to a misconception, which was afterwards fully explained to Lord Nelson's entire satisfaction, as mentioned in a subsequent letter, and it is only just to the Sardes that this should be made known, as it affects them in one of the characteristics on which they are most sensitive, and most pride themselves.

La Marmora in his last volumes on Sardinia, in describing some of the Sarde characteristics, mentions that the Sardes are given to "ruses," which expression he palliates by the equivocal compliment that it is "a failing common to those countries where the "people are poor and of primitive habits;" he might however have added "and to most other countries where the people are rich, and "the habits are anything but primitive." In justice to the Sardes I feel bound to say that though there are, as there are among all nationalities, many who are "given to ruses," and do not at all times adhere strictly to the truth, yet that generally they are as open and fair in their dealings, and give as little latitude to their imaginative faculties, as the people of most other countries, and, when they do overstep the limits of strict facts, it is usually done for the mere

love of the thing, as in Ireland, and with no sinister intentions though *sometimes*, as also in Ireland, there *is* an object to be gained by it.

This alledged failing is, however, mere child's-play in Sardinia, as compared with its practice in many, other civilized countries, and it seems to culminate in the Western states of America, and there, it is seldom resorted to, except to use their own phrase, out of "pure cussedness," or where some special object is to be attained. I shall not soon forget when some years ago, whilst smarting a victim under a deliberate well-planned scheme of this sort, I ventured to comment on it in very plain language in the presence of the Bishop of the diocese, where the incident occurred. He listened patiently to all I had to say and, though strongly objecting to the sweeping designation "of liars," yet he eventually admitted, to use his own words, that "*many of his flock did hold the truth too sacred to be told*,".

Physically the Sardes are a fine race; and though rather under than over the middle height, they are remarkable for their beauty of form, well proportioned shape, and straight limbs, combined with great strength and activity. They have brouzed complexions, black eyes, and black hair; a "blond," — either man or woman — is seldom seen in the Island, and a fat or corpulent person of either sex is almost as great a rarity. The women are also rather under the middle height, but of elegant figure, graceful carriage, large black eyes, dark hair and brunette complexions, and, though they attain to maturity at the age of 14, yet they preserve their figure and freshness to a "green old age,". It is not at all uncommon to see old persons of both sexes, who have passed their 80th year, walking briskly along without stick or any other assistance.

In the north of the Island the men in general are much taller than in the south, and in some districts they average nearly 6 feet in height, and are fine dark handsome-looking fellows. In these districts too, the women are much taller than they are in the south, and do not attain maturity till 15 or 16 years of age. They are

good-looking and well-made, but have not that voluptuous fullness of developement, which distinguishes the women of the south.

The Sardinian ladies dress in very much the same style as ladies in other parts of civilized Europe, except that there is not that extreme haste to adopt the latest fashion, and there is an absence of those modern excrescences and other adventitious "improvers," which, by their preposterous proportions, have gone far to deprive the Hottentot Beauties of their distinguishing characteristic.

The wives and daughters of the farmers and tradesmen, by the gorgeousness of their costume, amply compensate for the simplicity of dress amongst the upper classes, and, at their religious fêtes and other festivals, when they appear in "gala," or "full dress," they present a wonderful spectacle.

I was informed, when standing lost in admiration at one of these feste, that some of the dresses with their ornaments had not cost less than 2000 lire: and though this is not a large sum when compared with the unconscionable prices charged by fashionable milliners in London or Paris to "ladies in society," yet it did seem disproportionately high for the wife of a small farmer in a Sardinian village.

The surprise, however, at this apparent extravagance was greatly lessened, on its being explained, that these costumes are a sort of family heir-loom, handed down from mother to daughter, and treasured as highly as our hereditary jewels or ancestral portraits. The fashion too never changes, and, instead of feeling ashamed of being seen in the *same* dress at *two* different entertainments, they glory in its antiquity, and in the number of occasions on which it has been worn.

To the inquiring mind, however, an interesting problem presents itself, as to how many alterations some of the more antique of these dresses must, in the natural course of events, have undergone. There would not only be the gradual relaxation, rendered necessary, as the blushing bride blooms into the mature matron; but there will be those alternate enlargements and diminutions, which certain domestic events, that periodically occur in married

life, will necessarily entail; — and when these continual “lettings out,” and “takings in,” are perpetuated from generation to generation, it becomes a complicated calculation, as well as matter of grave astonishment, as to how changes an ordinary dress passes through, and for how long a period it can stand a “wear and tear,” of this sort. On my applying to a friendly Sarde for a solution, he at once introduced me to his wife, who, with charming “naiveté,” and perfect frankness, initiated me into the mystery, from which it would appear that there is a flexibility and durability about those portions of the toilette that require alteration, which is not observable superficially, but susceptible of easy explanation; the problem was satisfactorily solved.

The costumes of the women, both in their every-day dresses, and on “feste,” vary greatly both in colours and arrangement in different parts of the Island. In some districts a small black velvet jacket, open in front, is worn over a very short bodice of bright coloured silk and brocade, which is loosely laced before, and cut rather low; there are apparently no stays, and the garment next underneath seems to be of small service for either clothing or concealment. The bust too is exposed, but not to the same extent as occasionally displayed by some of the “professional beauties,” in our own country. The petticoat is of light brown cloth, very full, and between it and the bodice is a sort of neutral ground of protruding garment, which by no means adds to the general beauty of the toilette. La Marmora describes this characteristic, as “assez indécente,” and Dante alludes to it in terms, which shew that it was less decent in his day than it was when La Marmora wrote, or than it is now; but *then* neither of these “authorities,” had ever seen our society celebrities of the present day.

Another costume, more common in the northern than in the southern district, is a scarlet blue and green jacket fitting tightly to the figure, with edges of different colors and richly brocaded sleeves, worn open down to the front seam, with silver or gold buttons to close them when required. The petticoat is of dark cloth with bright



Sarde Costumes.

edged borders, ten or twelve inches deep, called "la succarina," when made of cloth, but, when of fine silk (as is often the case) it is called "la valdetta,". The under petticoat is also of cloth, but of a different colour and quality, and both are made "full," with countless plaitings at the waist, and being worn outside the jacket, fall on the hips with much elegance. The women, when walking and in church raise the "succarina," and bring it over their head with a peculiar arrangement which gives it the form of a knitted hood.

The bright border of the inner petticoat relieves the sober tint of the cloth, and the gay velvet jacket peeps out with effective brilliancy; and no one seeing the "succarina," worn as a petticoat would imagine it could be so easily and elegantly metamorphosed into a head-dress.

Sometimes the bodice is without sleeves, slashed and plaited and drawn tight in the lower part, and with a girdle of gold lace fastened in front with a gold or silver buckle, so as, according to La Marmora, "pour rendre la taille la plus fine possible,".

In some of the north eastern districts the skirts of the dress are drawn so tight, and it fits so closely to the figure, as almost to impede the movements; the thickness of the material however takes away much of the "suggestiveness," and makes it less objectionable than garments in this style, recently the fashion in our own country but now happily replaced by skirts of moderate pretensions.

The head-dress, called "Sucencia," consists of a gay-colored silk kerchief, tied into three knots triangularly, one of these fitting to the nape of the neck, and the other two joined together deftly somehow, and looking like a rosette, but so arranged as to shew the border fringe with most studied negligence; when in mourning, white, in place of coloured, fillets are worn, but similar in other respects. The head-dress of the women in some districts is a colored broad riband, about 7 feet long and 6 inches wide, twisted over the head and under the chin, and then fastened on the side of the head with a bow, so that the ends, which are embroidered, hang down gracefully.

The male dress consists of the “*veste*,” a double-braided dark cloth waistcoat, buttoned up to the neck, and generally embroidered with some bright colours; the “*calzoni*,” or pair of very full dark cloth trowsers or “*Knicker-bockers*,” extending nearly to the knees, and edged with velvet; the “*mutande*,” or white cotton drawers very full, and terminating inside the gaiters, which are also of dark cloth; a “*gabbenà*,” with a hood resembling the “*capoti*,” worn by the Moors, of varying materials but generally also of black cloth; a poke cap of the Phrygian order, but with the poke or bag much longer, and hanging down indiscriminately either in the front at the back, or over the right or left ear, according to the taste of the wearer or the direction of the wind.

The shepherd's dress consists of a waist-coat made of sheep or goat skin, called “*colletta*,”; and is a kind of jerkin or doublet, reaching to the knee; and a short pelisse made of a sheep-skin with the wool on, and worn over the *colletta*, with the wool *inside* during summer, and *outside* during winter. The edges are worked in gay coloured worsted and there are no sleeves.

In some districts both in the mountains and in the *campagna*, a cloak — very like a short Inverness cape and called “*Sacca de Coperti*,” — is worn; it is made of coarse black woollen cloth, and is used as additional protection in rainy and cold weather, and for lying down in either during day or night. It resembles the cloak said to be worn by the Roman soldiers in the days of the Empire. This garment, as well as the *Colletta* and *Pelisse*, have formed subjects of several elaborate dissertations between Cetti Gamelli Madao and other learned Authors, more remarkable for their angry and violent disputations than for any light they throw on the subject. There can however be not much doubt but that they were designed as they are used and admirably adapted, for protection against heat cold damp and other atmospheric alternations and to preserve as nearly as possible an even temperature of the body in all weathers. They afford too the best possible protection against the thorns and briars and prickly pears which have to be “*faced*,” on many occasion



Sarde Costumes.

1

and they adapt themselves readily to every movement, indeed they have no drawback except a want of beauty, and of this, according to La Marmora, they are “ *totalement dépourvées* „.

A Bonnet called “ *beretta* „ is worn in some districts, it is either of red or black cloth, the former colour distinguishing the women, and the latter the men; the men in the same districts also occasionally wear kerchiefs tied over their heads like the women.

The male sex too in some of the mountainous parts wear their hair long, and confined by a band or within a net, much after the fashion of the gentler sex. They never wear cravats or neck ties, and their linen, which is generally fine and often embroidered, is fastened at the collar and wrists with handsome broaches and buttons, and clasps of either gold or silver.

Of the Sardinian ladies it is impossible to speak in terms of too high praise; their unaffected simplicity, their continual desire to please, and their genial liveliness and cheerfulness, combined with a most contented domesticity, and above all, their extreme kindness and attention on all occasions — and especially in times of sorrow and sickness — endear them by ties far more affectionate and enduring, than those of mere beauty or accomplishments; though these latter attributes are seldom wanting. Their elegant form and graceful carriage, with dark brown complexions, glossy raven hair, and deep sparkling black eyes, glancing from behind coquettish fans, combine to render them irresistibly charming.

This art of using the fan seems to be intuitive with the Sardinian ladies, and must have been inherited from their Spanish ancestors, and the art in its descent has in no way deteriorated; nor are the other proverbial characteristics of their sex wanting. There is a Sarde proverb which says. “ They forget yesterday, think little „ of to day, and nothing of to-morrow „; and in further proof of this sentiment is instanced the fact that in the Sarde language there is no future tense. Whatever may be the exact meaning of this epigram in its entirety, or what is the inference to be drawn from this peculiarity in the conjugation of Sardinian verbs, I am not able

to say, but of this I am well assured, that the ladies of Sardinia are not more "oblivious," than ladies of the same position in the general world, and that they are as well able to maintain their own self-respect and dignity, as they are to captivate and retain the loyalty and affection of those whom they desire to charm, or care to please.

The accounts of the morality of the women in the lower classes are conflicting, but there is little doubt that many live in a state of concubinage till they can afford to marry, and no notice is taken of this condition, unless the woman is deserted by her lover, when the relations not only wreak their vengeance on him, but she is herself looked upon as a degraded person. In all cases, the men are extremely jealous, but very unnecessarily so, for, whether mistresses or wives, the women are seldom faithless.

A modern Sarde author in descanting upon the morals and customs of his countrywomen in one of the northern districts says, "When they come to the altar to receive the nuptial benediction, they are often accompanied by 3 or 4 of their children, and this in the very locality where a few years ago a deadly feud — which devastated a whole village — was caused by a young man kissing a girl in the public street." This is rather suggestive of the puritanical observance of the Lord's Day in some parts of Scotland, where any extent of dissipation is allowed in the way of private feasting and drinking, but to attend any public entertainment, or even play a tune of sacred music, is accounted amongst the deadly sins; "you munna whastle on the Sabbath."

The private life and pursuits of the Sardinians of the upper classes in the large towns are as much Spanish as Italian. They rise early, not later than six in summer, and, after taking a cup of coffee or chocolate, if residing on the sea coast, during the hot months they bathe, which occupies about a couple of hours. They then return home to colazione, which is the meal of the day, consisting of hors d'œuvres in the shape of sardines, anchovies, the roe of the tunny fish (infinitely superior to Russian caviare), and

quite so formal or monotonous, for that would scarcely be possible. Nothing, however, can exceed the general kindness and attention shewn to strangers, and the most agreeable recollections of these entertainments are invariably retained.

Balls are rare festivities, the Prefect and other high officials give one occasionally, at which all the fashion and beauty of the Island are present. The Clubs, both at Cagliari and Sassari, formerly gave one, sometimes two, balls in the season, but they have been discontinued of late years, for reasons not stated. These clubs, of which there are two in the island, one in each capital, are very different institutions from ours. No meals are served there, and nothing is to be had in the way "drink," stronger than light wines and soda water. A few Italian newspapers are taken, but there are no books. Card-playing is the chief amusement, "tre sette," which admits of any number of players from two to five, each having ten cards, is the favourite game, but "whist," is occasionally played; and at whist, the player on your left cuts the cards, and you deal to the right; in other respects, it is played as in England, excepting that the rubber counts four points instead of two. The stakes are small, and there is no betting or gambling.

Members are elected by the Committee, who manage the Club. The entrance fee is 100 lire, and the yearly subscription is half that amount. The Committee are most courteous and considerate in making strangers honorary members of the Club during their residence in the Island.

The theatres and operas are open only during the winter months, and are most favourite places of evening amusement. The actors and singers are far above the average in merit, and the ballet is really good. None of the performers however are Sardes, and the entire company comes over "in a body," from the Italian Continent, and is composed principally of Italians, though there are some French and English artistes amongst them.

The "Premiere danseuse," in the ballet at one of the theatres I visited was said to be a native of Yorkshire, but on reference to the pro-

-gramme, there was no Yorkshire or any other English name on it; after inquiry however and a subsequent personal interview with the members of the "corps," it was explained that the lady, who appeared in the play-bill under the Italianized title of "Signorina Sofia "Coppini," was known in her native town as "Sophy Coffin."

A private box for the season, to hold 6 persons comfortably, can be had for 200 lire (£. 8); stalls are from 1 to 1 1/2 lire for the evening; and the gallery tickets are half a lire. The salaries of the actors are however proportionately low, the highest not exceeding 75 lire, and the ordinary members not more than 12 lire, per week, which is less than the nominal "pay" of our notoriously underpaid "corps de ballet," and less than it is possible to live on *even* in Sardinia.

There are cafés connected with and attached to the theatres, which afford a general lounge for the upper and middle classes; and here coffee and punch may be had at reasonable prices. There are however no casinos, singing or dancing saloons, or other public places of amusement, either for the working classes or for the "rising generation"; old men and young periodically assemble in small groups at the various small wine-shops, and drink and smoke, and sing and play cards, in a grave solemn fashion.

The Sardes have many peculiar habits and customs, some of which are less pleasant than singular. They are inveterate smokers, and in this respect they could take away the palm heretofore accredited to Americans. A Sarde is seldom seen without a cigar in his mouth, and the "weed" is anything but fragrant; it is made from Italian grown tobacco — dark strong and bitter — and as five cigars can be purchased for a penny, it is a luxury that can be indulged in without any large expenditure. As an almost necessary sequence to this custom of smoking is the unpleasant habit of expectoration, which is practised to an extent which again throws America completely into the shade; and as the Sardes have not attained that dexterity and accuracy of aim, and calculation of distance, which distinguish our trans-atlantic brethren, the only redeeming characteristic in the practice is wanting. On all occasions and under

all circumstances, at meals, in sitting rooms and bedrooms, at church or in their offices, in railway carriages and at the *caffés*, the custom is freely and indiscriminately indulged in. The fact that the rooms of the houses are tiled and without carpets renders the practice some-what less objectionable and injurious than it would otherwise be, but to the stranger, unaccustomed to such exhibitions, it produces a "sort of feeling," which it takes some time to tolerate, and would take still longer to appreciate.

The domestic servants in Sardinia are a very heterogeneous class, both males and females. They are independent in their actions and familiar in their manners, and not over-zealous in the discharge of their duties, though generally intelligent and desirous of pleasing. They are hired by the month, but for misconduct can be dismissed without notice; their wages, however, must be paid up to the day of dismissal, and are not forfeited as they are in England. The wages of the women are about 15 lire per month, rather over £ 7 a year, and the men, who live in the house, receive about double that sum; the cook however is an exception; a really good man cook (of whom there are very few in the Island) receives as much as £ 50 a year. The men-servants as a rule live in their own houses, and their wages then average about 2 lire a day. The grooms act also as coachmen, and both they and the gardeners help to wait at table, and do any other work in the house they may be called upon to perform. A suit of livery is a very rare sight, the coachman comes direct from the stable and mounts his box, in the same attire as he groomed his horses in, and with his head adorned either by a "wide-awake," or a battered old "top-hat," and without gloves. They wait at table in the same costume, as do also the gardeners, when they are called into requisition for this household duty.

The coach-house harness-room and stables form one continuous shed; the carriages and harness occupying one end, and the horses another. The horses in the towns are fed on straw hay and

beans; oats appear to be unknown as an article of horse-food in any part of the island.

The harness in ordinary use is either of brown or black leather, with silver or brass mountings, and very similar, both in appearance and appliances, to our English make, except that collars are never used, the broad strap across the chest being universal, and the reins — whether for one or two horses — are double; one set is fastened to the nose-band, and driving is generally done from this set, and the bit is seldom used, except in cases of fractiousness or accident. If extra horses be needed, either for cart or carriage, they are yoked alongside and not in front, and are attached to the vehicle, by means of “swingle-trees,” and ropes, in a most primitive but effective manner.

In riding, the bridle — if there be one — is single bitted and single reined, and generally a curb; but in the country a halter is invariably used, and to this a long rope is attached for tethering the horse, while he provides and eats his own meal.

In the starting and stopping of horses, the exact reverse sounds to those adopted in England are in use. The sharp shrill subdued “hiss,” means “stop,” and the broad elongated “wo-oah” signifies “go on.” In the reverse fashion too “the meeting and passing,” are on the left and right sides, instead of the right and left; but this is not the case in Rome nor the rest of Italy, though it is the rule in Paris and many other continental cities.

The Sarde saddle is large heavy and cumbrous, and not unlike the Mexican. It is generally covered with a sheep or deer skin thrown across the seat; and, hanging down on each side, is a large bag, or rather sack (often highly ornamented), divided in the middle, and having two separate pockets, each of which is generally filled either with clothes or provisions, and about evenly balanced.

Forty years ago the aggregate number of carriages in the Island might have been summed up as follows; two small omnibuses running between Cagliari and Sassari twice a week, with a daily service between Sassari and Porto-Torres; three vehicles plying for

hire at Porto-Torres, seven at Sassari, and eleven at Cagliari; and these with the addition of ten private carriages made up the sum total. The numbers have however been greatly increased of late years, and particularly since the opening of the railways; omnibuses now run daily to and from every town and large village to the nearest station; but carriages for hire, except in the cities and large towns, are still few in number; the charges are most moderate.

The rural Sardes are not fond of travelling, and when they do travel, the almost universal mode of locomotion is on horseback. If the wife accompanies her husband, she rides on a pillion behind him; the pillion itself being often of elaborate construction, and lined with velvet and highly ornamented. When two of the gentler sex travel together, they proceed in the same fashion, the one who sits first riding astride like a man, and her companion sitting sideways on the pillion behind; sometimes a strong-minded female, when travelling alone, will ride after the manner of men. Oxen were formerly often used as "hacks," by both men and women, but the custom has now almost entirely gone out of fashion.

The process of "Courtship," in Sardinia was until a few years ago carried on in an exceptionally singular manner. The lovers were not permitted to meet either privately or in society, and if a meeting should accidentally occur, they recognised each other as distant acquaintances, neither shaking hands, nor holding converse together. The only communication between them was conducted through the medium of the "deaf and dumb," alphabet, the lady performer hanging over the balcony, or half hidden by the curtains of her room, and the gentleman standing below; this "process," was continued very often for several hours, the rapidity and dexterity, as also the patience and perseverance, exhibited on these occasions being truly marvellous.

Courtship after this fashion has been known to be protracted for years, until one or the other was wearied out, or until the gentleman was financially in a position to make a formal offer for the object of his affections. This mute and distant interchange of lov-

-ing words was no doubt a very safe and a highly proper mode of proceeding, but I venture to think it would not have found favour amongst the youth of either sex in our own country, and indeed in Sardinia it is, like many other "good old" customs, gradually dying out. It was however an essential preliminary in former times, and having been satisfactorily gone through, the lover, accompanied by his father or an intimate friend, proceeded to the house of his lady-love and there entered into formal conversation with her parents, sometimes carried on in metaphorical language, as: That he wished to have one of their sheep "to be the pride and glory of his flock;" or "That he had lost a sheep which, he felt sure, was concealed in their house." If the parents were agreeable, the lost sheep was eventually produced, though not until all the other daughters — if there were more than one — had been first trotted out, so as to keep up the fanciful amusement. The parties then proceeded to the more unsentimental part of the arrangement, the L. S. D. of the affair; and this being adjusted, a day was fixed for the exchange of vows, and they separated. This first ceremony is called the "Ora del Buono," and the kiss, which is then for the first time given to the "sposa," is a solemn pledge not to be departed from, without serious consequences to the man, and dishonour to the lady.

The day for signing the marriage contract was next named. The friends of the bridegroom march in procession, carrying the articles composing his store to the house of the bride's father; and the inmates, keeping up the joke, enquire "who and what they are who thus intrude." To which they reply: "Honour and virtue." They are then admitted, and presented to the assembled family and friends, who are all attired in the gayest costumes for their reception. The goods are next examined, the reciprocal dowry is inspected, and a feast follows. The day of the marriage is then fixed, and is publicly announced in the village church on three consecutive Sundays, eight days before the wedding takes place. A civil ceremony before the mayor is also essential to the validity of the marriage,

and is generally performed on the same day, and the written consent of the father, or other guardian, of both the bride and bridegroom, — if under 25 years of age — must have been previously deposited at the municipal offices.

In former times there was another intermediate ceremony to be gone through before the marriage. The bridegroom, accompanied by his friends in procession, proceeded to the house of the bride, with his goods packed in carts, which after being again examined are taken to his house. The bride had next her part to perform, and a few days afterwards, the goods which she contributed, were taken in carts in a like procession, and deposited in the new home; the smaller and more brittle articles, such as looking glasses and crockery, being carried by her friends. The furniture and other things were then all unpacked and arranged, and the house was decorated with flowers, which it would have been impious to remove, and they remain untouched for months, till quite withered. The procession then moved to the church, where the nuptial ceremony was performed, after which they returned to the father's house to luncheon, and the happy couple drink soup out of the same plate with the same spoon, the first proof of their indivisibility and mutual support.

When the feast was over, the bride, seated on a horse gaily caparisoned with ribbons and ornaments, was escorted home by a cavalcade, preceded by the musical * *Laneddas* , playing a nuptial song, in which the whole party joined.

On their arrival at the house, the mother or nearest relation received the bride, and sprinkled on her some grain and salt. She alighted from her horse upon a small table covered with embroidery, and by a step from it passed into the house, without touching the pavement. She was then escorted to the bridal chamber, the nearest relatives sprinkling bonbons over her, and a glass of water was emptied at her feet, the moment she entered the room; a dance with its usual accompaniments completed the festivities for the day.

It is the custom in many parts of the island for married people to be buried in their wedding clothes, which are never worn

except on those two occasions, and the friends, while undressing the bride, allude to this. She appeals to them, expressing her hope that their friendship will last till death and that they may be the persons to re-clothe her at her burial in her marriage garments, to which they of course reply: "May you live a thousand years!" and other like compliments. The bride receives none of her relations or other friends during the first three days after marriage, but she has a young maiden companion staying with her.

Childbirth in Sardinia is not a very serious affair. The continual exercise and employment in domestic affairs during the period of pregnancy, added to the warmth of the climate, greatly facilitate and alleviate the pangs of parturition; and, instead of straw being laid down to deaden the sound of carriages, and knockers tied up with white gloves, bedrooms darkened, and strict injunctions given as to silence and quiet, the friends and relations assemble in an adjoining room, and dance and sing, continuing their orgies till the child is born, when it is washed with wine, and rubbed gently with salt, before it is "swaddled." The washing with wine is a custom mentioned by Plutarch in his life of Lycurgus, and the rubbing with salt is of still more ancient origin, and may be traced to the Jews. Exekiel alludes to it in the passage. "Thou wast not salted at all, nor swaddled at all."

A custom relating to childbirth is said to have existed in some districts, and, though well authenticated, is scarcely credible, and is no less ludicrous. While the wife was undergoing the pangs of parturition, the husband was put to bed, and received the same care and nutritive support which she was having, precisely as if he himself were being delivered of the offspring. It is almost too absurd to credit, and yet Diodorus Siculus, an accurate historian, when speaking of Corsica, says: "A most paradoxical system exists relating to the birth of children; for when the woman is in labour, no care is taken of her, but her husband goes to bed as if he were ill, and there remains as if he himself were suffering the pains."

Girls arrive at the honours of maternity at a very early age

in Sardinia, and marriage at the age of thirteen is by no means unusual and there is, it is said, a well authenticated instance of a young girl at Pula — a small town not far from Cagliari on the western side of the gulf — having arrived at womanhood at the age of seven years, and there are several other instances of early maternity in girls between ten and eleven, but these, of course, are exceptional phenomena.

Funeral rites are still celebrated in many districts with much pomp and ceremony, in the belief that it is pleasing to the dead. The body is placed in the middle of the room in the coffin with the lid open, having the face turned towards the door. The friends and relations assemble with a batch of women, who, either for pay or voluntarily, mourn and sing praises. They are dressed in black stuff gowns and assume an ignorance of there having been any death, until suddenly perceiving the dead body, they begin weeping and wailing, gnashing their teeth, tearing their hair, throwing themselves on the floor, and raising their clenched fists to heaven. When this frenzy is over, they sing praises eulogising the deceased, and, if he has been killed in vendetta, they call loudly for vengeance.

The men do not shave for a year after the loss of their wives, and the women for the same period seldom leave their houses. They wear a dark brown cloth cape, one end of which covers all the face, except the eyes, reminding one of the ordinary dress of Mahometan women. On the anniversary of death or wedding-day, the survivor visits the tomb, has a mass said, and in the evening there is a funeral feast in remembrance of the deceased.

A widower or widow, marrying again, is generally surrounded immediately after the ceremony by the boys of the village, who beat and clang together old pots and pans, adding other discordant sounds, including the blowing of rams' horns; this is sometimes intended as a reproach and sometimes as a compliment. The same custom prevails in several of our English villages, but with us there can be no mistake as to its being done in disapproval and derision; there is nothing at all complimentary in any way connected with it.



Cagliari, City and Port.

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

CHAPTER XIV.

Cagliari — Sassari — Iglesias — Tempio — Alghero — Bosa —
Oristano — Nuoro — Macomer — Porto-Torres — Terra-Nova —
Senorbi — Islands — Universities — Schools — Museums — Hospitals
— Markets — Asylums — Public Buildings — Charitable Institutions
— Work-houses — Water-works — Houses, Streets, and Drainage.

Cagliari, the capital of Sardinia, with a population of over 40,000 inhabitants, has a most picturesque and imposing appearance. It is situate on the east side of a magnificent gulf, or arm of the sea, about 12 miles long and 6 miles broad; and there is a good-sized port close to the city, with safe anchorage and excellent shelter in the bay beyond.

The town is built at the foot and on the sides of overhanging hills, which add to the picturesqueness of the outline. The upper part of the town, called the "Castello," is surrounded by walls and fortifications, and is the aristocratic quarter. Here are the residences of the Prefect, the General of the forces, and the Civil functionaries, with their offices and departments, and the barracks and principal public buildings. Here too also are the mansions of the various noblemen and other large landed proprietors of the southern province of the Island.

The castle was built A. D. 1217 by the Pisans, but has been since that date repaired and enlarged several times during the Aragon and Savoy dynasties.

The lower part of the town is sub-divided into three quarters. The “ Marina, , extending from the castle to the shore, where are the principal shops and places of business. The “ Stampace, , situate to the west of the Castello, having also shops, but towards the suburbs inhabited by the poorer classes; and the “ Villa Nuova , quarter, lying to the east, has several mansions newly built and with large gardens, the residences of merchants, but the greater portion of this quarter also is occupied by the cottages of workmen and the shops of small tradesmen.

There are public gardens and promenades, tastefully laid out with flower beds and shrubs, and having terraces, along the sides of the over-hanging hill, sheltered but commanding extensive and magnificent views. The distant ranges of the Serpedde mountains are seen on the north, with the picturesque villages of Pauli, Selangins, and Quarto in the fore-ground; while to the east and south are long indented lines of coast washed on both sides by the sea, with the “ Capo di S. Elia , at the entrance of the Gulf on the south, where the eye meets the broad expanse of Mediterranean, extending without a break to Sicily. On the west, lying at your feet are the port and bay, the port filled with shipping, and the bay studded with steamers and other large craft, and the busy town is in front; the broad lake of “ Stagno di mare , lies to the north, and in the far distance across the bay are the villages of Orri and Pula, backed by the forests and mountains of Entre Nedda and Saalo.

Amongst the remarkable public buildings is the cathedral, commenced by the Pisans in A. D. 1312, and finished by the Aragons in A. D. 1331, and afterwards rebuilt by the Spainards in A. D. 1669. The cathedral chapter consists of an archbishop, a dean, thirty canons and fifty-five priests. The ordinary revenue of the see varies, it is said, from £. 15,000 to £. 20,000 per annum, besides the extraordinary funds arising from fines, lapses, vacant livings, gifts, extra masses, and voluntary offerings generally; and these together would probably amount to nearly half as much more, but as to this nothing certain is known.

The high altar is of solid silver; and there are several excellent paintings (most of them copies of the old masters), many magnificent monuments, and much valuable plate; amongst the plate is a silver salver with a representation of one of the fables of Neptune engraved on it, and another representing *Bacchante*; two instances of pagan allegories supporting Christian rites.

There are 52 churches in Cagliari, the two most interesting being *San Lucifero* and *Sant' Agostino*; but there is nothing very special or very beautiful connected with any of them.

The municipal Palace is a small poor building; and what was the Viceregal palace (now the residence of the Prefect) is very little better, having neither external nor internal elegance to recommend it.

The Barracks, which are comparatively new, have no architectural pretensions, but are well situated and commodious.

The Law Courts are miserable buildings — dark uncomfortable and dirty; — and the proceedings are conducted in a half-sleepy sort of manner; no interest being apparently taken by the public in what is going on, unless there be a trial for murder, or some other sensational case. Capital punishment is practically abolished in the island; the last execution took place fifteen years ago.

There are several hospitals and asylums at Cagliari, as well as at Sassari and in some of the other large towns, partly endowed, and partly kept up by voluntary subscriptions; the management in former years was much to be deprecated, but is now much improved. A most gratifying exception from its first institution was the military hospital, where exist good order, cleanliness, comfort, and contentment — essentials which were at one time altogether unknown in the other hospitals.

There are also asylums for foundlings, but as the depositor only pays 2 lire (one shilling and eight pence) per month, and the other funds are very small, its state of neglect and discomfort is easily accounted for. During one decade of its record, out of 810 children received it is stated that 473 died. The number admitted bears however a small proportion to the real number of illegitimate

children; their mothers — whatever their immorality — have far too tender a regard for their offspring to consign them to the “ tender care „ of these institutions.

The number of indigent poor persons receiving parochial relief in Sardinia is comparatively very small; in the rural districts, when old or incapable of work, they are universally supported by relatives friends or neighbours. At the two capitals and in some of the large towns are public institutions, somewhat resembling our Workhouses, but the aggregate number of their occupants from the whole Island does not exceed 200. The food and accomodation are quite equal to the average in England, and, as with us, the sexes are kept apart. Out-door relief is never given except voluntarily.

There are no lunatic Asylums, indeed there are very few lunatics in the whole Island, and those, which are not taken charge of by their relatives, are taken to the workhouses, where they are well cared for and attended to.

There are several charitable institutions for the relief of the poor, but their system of management, it is said, greatly detracts from their efficiency.

A large covered market at Cagliari is now in course of erection, and when completed, will afford accommodation for the sale of all sorts of produce, and will be a great boon during the rainy season, though at other times both vendors and purchasers prefer the open air for their business operations.

The Theatre is a plain building, but handsomely decorated internally; and the performances, sometimes dramatic and at other times operatic, are well attended.

The University is a large plain edifice rebuilt A. D. 1764. It is presided over and managed by a Council composed of the principal civil and ecclesiastical authorities. There are 5 faculties or classes, viz philosophy, theology, law, medicine and anatomy, each faculty having a certain number of members, including professors and doctors. Examinations (four private and two public) have to be

passed by the students before they can obtain a degree, and the whole "curriculum," occupies from three to four years. The election of professors is also by examination, but favour, it is said, has much to do with the appointments. The subjects for examination for the general students comprized, in comparatively recent times, little more than the ordinary rudiments of education, formerly given to the English youth at most of our public schools; but now they include as many subjects, and take as wide and learned a scope, as are given to students at our universities.

Education for the priesthood has already been referred to, and in law, the knowledge of the national code, based upon, and composed of the ancient laws, altered and revised from time to time, was all that was needed. The study of the principles and doctrines of jurisprudence, though not altogether ignored, existed more in theory than practice; and the same remarks would apply with equal force to the study of medicine, which was a few years ago far in arrear of other civilized countries, and Galen was as much worshipped and believed in the medical, as Justinian in the legal, branch of science. The state of things is however now much improved, and there are many clever lawyers, and medical practitioners in the Island, who have received their education at the Sarde Universities.

The average number of students in all classes is about 600, and besides these, there are about 100, called "majoli," a class of students, who are sons of poor parents, and who, while attending the University lectures, are in service as domestics; and from this class many priests and lawyers have risen to the highest eminence.

The University at Sassari is a very similar building, to, but rather smaller in size than, the one at Cagliari; it is constituted on the same basis, embracing the same range of subjects, and requiring the same examinations, and its diplomas and degrees confer equal privileges.

The public Library at Cagliari is connected with the University there, and contains about 30,000 volumes, principally ecclesiastical

and historical; there are also several manuscript works, mostly fragmentary, and in the Sarde language.

In addition to the Universities, and public schools of elementary education, there are schools of technical art, and also private seminaries for both boys and girls, where moderately good instruction is imparted. The number of these schools in the whole Island, is 64, and the total number of scholars is about 650. The public schools number about 900, and the scholars rather exceed 39,000, of whom nearly three fifths are males. This gives an average allowance of 44 scholars for each school, and 1 in 18 of the population, which is very nearly the same as the rest of Italy, and is almost identical too as regards the number of schools per head of population; the proportion being 1 school to every 700 inhabitants. There are in addition 220 sunday and evening schools, with an average total attendance of 5,400 scholars. In Italy, unlike Sardinia, the numbers of male and female scholars is nearly equal.

The Museum, which forms part of the University, and occupies several large rooms, was founded in 1806 and is under the charge of a curator and a small staff of subordinates. The collection comprizes coins, medals, sarcophagi, statuary, specimens in natural history, and other relics and curiosities. Coins are divided into 4 classes, consisting of 100 specimens of Carthaginian, 200 of early Roman, 2400 of the time of the consuls, and over 4000 of the imperial period; all of which have been found in the Island.

The terra-cotta and glass relics comprise 2000 specimens; of which 1000 are Phœnician, Carthaginian, and Roman.

The statuary and sculpture present a poor exhibition, There is no perfect figure of *anything*, and the isolated disjointed fragments have a most melancholy and mutilated appearance.

In the department of natural history the mammalia form a very small collection; but there are upwards of 1000 ornithological specimens, all of which are Sardinian; the entomological specimens are also numerous and interesting.

* Ichthyology, presents 400 *dried, specimens, and 200 in spirits

of wine — most of them Sardinian — and in the Conchology department there are 1100 native, and 600 foreign, shells.

The mineralogical cases contain over 3000 specimens, comprising every variety of mineral, and in every shape and form, that has ever been found in the Island, and are valuable and instructive.

Besides these specimens, arranged in their several departments, there are sepulchral stones, coffins, inscriptions, models of nuraghs and other ancient structures, and a variety of miscellaneous relics and curiosities.

Interesting as the museum is, it might, and no doubt will, be rendered much more so; considerable attention appears to have been given of late years to the collection of all the most valuable treasures of ancient art, as and when they are found, and no relics can now be taken from the Island without special permission.

Sassari, the Capital of the northern province, and having a population of 38,000, is in many respects very like Cagliari. It has a castle, municipal and provincial palaces, barracks, university, law courts, hospitals, asylums, 17 churches and a cathedral. The latter was built in the 15th century, but has nothing peculiar or remarkable about it, except that the high altar is composed of a variety of jaspers, instead of being of solid silver as at Cagliari.

The Northern Capital has however several distinctive characteristics. It is situate in the midst of orange groves and olive orchards, at an elevation of 650 feet above the sea, and was, until recently, surrounded by a high wall, built in A. D. 1362, with large square towers from 60 to 80 feet high. In former times too it had a separate government and jurisdiction apart from Cagliari, and it has been the scene of many sieges and contests with Genoese, Pisans, Arragonese, Spaniards and French, as well as with its own government and nobles; but in the 16th Century it became identified with the rest of the Island, and since then has shared the same vicissitudes.

The "Sassarese", are not considered pure Sardes, there being a large mixture of Spaniards and Genoese, which gives them a com-

posite character; but the nobles, who reside in the city, and of whom there are several, are nearly all of old Sardinian descent.

One of the most distinguishing features of the city is the fountain of Rosello, which is of grand proportions. At the four corners are large figures representing the four seasons, and at the feet of each figure copious sprays of water issue, as also from the mouths of eight lions, two on each of the sides of the fountain; the whole is of pure white marble and well sculptured, and few cities can boast of a handsomer ornament.

Though the town is now fairly well supplied with water, from the waterworks recently constructed by the Corporation, a considerable trade is still carried on by the old water-carriers, by means of barrels carried on donkeys, and it is almost "even betting," that on calling at a house you are confronted by a man, a beast, and a barrel, in the passage as you enter.

Sassari has the reputation of being a healthy place, and yet, when the cholera raged in the Island A. D. 1855, upwards of 8,000 out of 22,000 inhabitants (over one third of the total population) were swept away; and it is recorded that in the year of the great plague A. D. 1525, upwards of 15,000 people were carried off by it. On both occasions Cagliari and the rest of the Island suffered comparatively slightly.

At Sassari in 1829 was born the double infant "Ritta Christina," whose exhibition excited much curiosity in the medical and anatomical world. This "lusus naturæ," was double only as far as the waist, and single below, so that one pair of legs had to support two heads, four arms, and two bodies. Pain and pleasure were equally participated by the two; and one of the hearts was placed on the right, and one of the livers on the left, side. Action was independent of the double will of the brain, and sleep was simultaneous. The two children however formed a strong contrast. Christina on the right had more appetite, and a lively and animated disposition; while Ritta was melancholy with a countenance of a blueish tinge.

Christina lived for a short time after the death of her sister, but died before attaining the 9th month of her existence.

As a rule there is no pretension to architectural design or decoration either in the Capitals or large towns. Some of the ancient buildings — noblemen's houses and public offices — are however, exceptions, having handsome façades, with much florid carving over the doors and windows; but internally everything, excepting the staircase which is almost always of beautiful white marble, is of the very plainest. The furniture, as a rule, is poor and antiquated in the extreme, and there are no statues, paintings, or ornaments worthy of the name, and no library of books, nor any of those knick-knacks or bric-a-brac, which give such an air of comfort and refinement so observable in our English homes.

A fire place is a very exceptional luxury, and there are no chimneys to the houses, which gives them a singular appearance in the eyes of a stranger; fires however are never needed, except for cooking, and *that* is generally done in an open hearth in the middle of the kitchen. The fuel used is either wood or charcoal; and how the cook can contrive to send to table several hot dishes every day with such appliances has often surprised me. In some of the larger and more modern houses there are stoves and ovens, but they are very rare.

The system of drainage in both cities and towns is very imperfect; it has however been much improved of late years, but even now several of the dwellings of the poorer classes in Cagliari and Sassari are below the level of the streets, and are imperfectly drained, close, damp, and unhealthy; moreover most of the streets are generally decorated with innumerable articles of clothing in the last stage of washing — a process which, judging from the frequency of display, would seem to be going on every day — suspended across the streets from the balconies on each side at short intervals and hung so low as to impede the currents of air and scarcely give head-room for pedestrians; and travellers on horseback, or in carriages, have to resort to a continuous system of "ducking

down „ in order to avoid unpleasant contact with the moist and imperfectly washed articles dangling about on every side.

The streets with few exceptions, are narrow tortuous ways, paved with stones, which have the appearance of petrified, or rather *vitrified*, kidney potatoes, for they are as slippery as glass. Indeed so narrow are some of the streets, that there is not room for vehicles to pass each other; and, as most of them are long and steep, constant disputes arise, which often end in a fight. It is dangerous too for pedestrians, for there is no foot-path, and as most the vehicles are drawn by oxen, with wide spreading horns, there is not much spare room to squeeze past; some of the oxen too have “ wisps „ of hay or straw on their horns, denoting that they are vicious, and not to be trusted, which does not make the passage more safe or agreeable. This custom of “ decorating „ the horns may be traced back to the ancient Romans; Plutarch narrates that Lucinius, when asked why he did not attack Crassus, answered: “ He wears hay upon his horns „.

There are, however, some handsome wide streets and piazzas in both the Capitals and in some of the large towns, which are used as promenades for the towns-people, who parade themselves every evening in summer from 7 to 10, and in winter from 4 to 6 o'clock.

In most of the towns, and many of the large villages are works for the supply of water. In general these works have been constructed at the expense of the communes, with money borrowed on the corporate property or on security of the rates. No charge is made for the water, where it is supplied at the fountains or in the open spaces and squares, but where pipes are carried into the houses a small uniform specific charge is made.

At Sassari the corporation have recently constructed water-works at a cost of over a million and a half of lire, bringing the water from a distance of 10 miles; but at Cagliari, a Joint-Stock company supplies the city with water, and also with gas. The gas-works at Sassari are also the property of a public company. Both companies pay a good dividend on the capital invested.

Houses and other buildings in Sardinia are constructed of stone, where quarries are convenient, but, where stone is not readily obtainable, they are constructed of bricks, which are either sun-dried or burnt in kilns, both of which sorts are made in the island. The kiln-made are the best and most durable, but in the villages the sun-dried are generally used as they are cheaper, and, when covered with plaster, will last for centuries. The outside walls are either painted, or coloured with lime-wash; the internal walls are of plaster, and are painted *not* papered, with borders of gaudy colours in fantastic patterns, the ceilings also are painted; the centre and corners being filled in with pictures of mythical animals in tints of startling contrast, and having no resemblance to any object in creation.

Iglesias, situate in the south-west of the Island, and connected with the main line of railway by a branch about 15 miles in length, is the "capital of the mining district," and is one of the busiest and most flourishing towns in Sardinia. A college for the special education of mining Engineers, and an extensive museum of mineral productions, are amongst its most interesting features. Iglesias is said to have derived its name from the number of churches it contained in former times, but very few of them new remain; it is however still a bishop's see, and the Cathedral, built in A. D. 1215, though of Pisan architecture shews few traces of the style of that period. There is a picturesque old castle overlooking the town; its date is unknown, but it bears an inscription as to its reparation in A. D. 1325 by the Arragonese Kings, who then governed the Island.

The Iglesiasians call their city the "Flori de mundo," which, though rather a self-glorifying sort of designation, is yet to some extent justified, by the beauty and richness of the gardens that surround it on all sides.

Tempio, one of the most interesting towns in the Island, and in the extreme northern district, is a grand old place, and deserves notice. The streets are wider than in most Sardinian towns and the houses are built of a dark grey granite. The Cathedral is of a mixed style of architecture, evidently built at different dates;

it is large and lofty, and the general effect is fine; the high altar is of coloured marble, and the choir is ornamented by handsomely carved old oak. The pictures and decorations are however poor.

In addition to the Cathedral there are 13 Churches in the town, and 12 in the suburbs, and, as the total population is under 10,000, this gives a church to every 400 people, besides a Cathedral — a very liberal allowance; and yet the Tempiese are not more moral than the inhabitants of other towns, if we may draw any conclusion from the criminal statistics, and the records at the hospital for “*enfants trouvés*”.

Tempio is now under the Government of the Prefecture of the northern district; but 40 years ago it had a Governor of its own, “whose palace” (quoting the words of Mr Tyndale from his book, written at the time), “retinue and establishment consist of 3 rooms on a second floor, a female servant and a sentinel”. In other respects too at that period the appointment does not appear to have been a very enviable one, for the predecessor of the then Governor had been barbarously shot, and the present Governor had already received two “warnings” given in the usual fashion, by throwing a rifle bullet through the bed-room window. The well-known saying of the private soldier in England that: “he had leased his life for 21 years to be shot at for a shilling a day,” might with greater appropriateness have been uttered by the Tempio Governor of that date, for his pay was almost as small, and the dangers to which he was exposed, from disappointed suitors vendetta fever and other casualties, far exceeded those incurred by the British soldier in any phase of his existence.

Tempio is now the centre of two most important industries, cork and wine; upwards of 1200 tons of the former are produced annually, worth on an average nearly £. 30 per ton; and over 10,000 hectolitres of wine are exported, (and there is also a large local consumption) which sells wholesale at an average price of 25 lire

per hectolitre. In Tempio itself, and in the neighbouring villages, the retail price is 10^c per litre, not quite 1^d per bottle.

Barley, too, is grown largely in this district, and is the best in the Island; fetching the highest price, about 10 lire per hectolitre, equal to about 24 shillings per quarter.

The archives of the town, which are voluminous, relate almost exclusively to Papal ordinances, and Church matters, and are of no general interest.

The country around abounds with streams and fountains, which give a freshness and verdure to vegetation, the more conspicuous by contrast with the cold grey granite which is the geological formation.

There is distant a few miles west from the town a small waterfall, about 30 feet high, called "Il Pignarone," which on a still fine day can be heard at Tempio, and, when it "sounds loud," is the harbinger of bad weather. There is too, not far off, a fountain, called "Fangio," so cold that at certain seasons it breaks the glass into which it is poured; and wine in bottles, when immersed in it, loses its colour in a few hours.

Tempio has been the scene of many bloody conflicts amongst themselves the nobles and lower classes, and with the Pisans, Genoese, and Spaniards.

Alghero was formerly a town of great importance, and the visit of Charles the Fifth to this city A. D. 1541, on his second expedition to Algeria — though Robertson in his History does not allude to it — is an event of no small importance in the historic annals of the Island. The house in which he resided is still known by his name, and remains as it was during the royal visit. Some columns formerly stood in front of the door, to which a chain was attached, and it afforded to criminals a refuge of equal efficacy with the altars of churches, and was considered inviolable. It may be mentioned here that the right of sanctuary still exists in the Island, though now rarely resorted to, as it confers upon civilians but a short respite from justice, and deserters from the army can now be dragged at once and by force from the very steps of the altar.

Bosa is the chief sea-port town on the west coast. It was founded in the 12th century, by the Malaspinas family, and is picturesquely situate in the valley of the Temo, having the grand old ruins of the castle of Serravalle overlooking it. The ancient city of the Roman period was situate two miles further inland, on the left bank of the river, which is navigable from this point to the sea; many vestiges of the old town still remain, and Roman coins and inscriptions are often found. A church, built in the 11th century, dedicated to St. Peter, still exists in a good state of preservation, and here services are performed on special occasions. Bosa is the seat of one of the episcopal sees, and the present bishop (Monsignor Cano) is one of the most popular men in the Island. His walks through the city are like triumphal processions, the men taking off their hats and bending their heads, the women curtseying, and the children kissing his hands rings and vestments, and asking a blessing. He is too a most polished and learned gentleman, and speaks many languages; and I am indebted to him for much valuable and interesting information about the Island, as well as for many pleasant days of social intercourse. His hospitality and courtesy are proverbial, even in this Island of politeness and hospitality.

The neighbourhond of Bosa is fertile and productive in wine and oil. The Malmsey (Malvasia di Bosa) being one of the most celebrated and highest priced wines in the Island, and when the branch Railway, connecting Bosa with the main line at Macomer, is completed (and it is to be one of the first "lines of the secondary period,") the commerce of the town and district cannot fail to be largely increased.

Nuoro is situate almost in the centre of the Island, and may be said to be the capital of the "Highlands," of Sardinia. It stands upon a granite formation, at an elevation of 2000 feet above the sea, and here the Tirso, the largest river in the island, takes its rise.

The town is irregularly built, and has a rather sombre aspect, from the fact that the houses are constructed of granite, and cemented with lime of dark colour. It is the seat of one of the

episcopal sees of the island, but neither the cathedral nor any of the churches have anything beautiful or remarkable, either external or internal, to attract attention; the only building of any importance or pretension is the prison, which is of modern date, large and imposing, probably from the fact that Nuoro is, or rather was, the centre of the most lawless district in Sardinia, and here too are held the "Assizes," for a large and populous circuit.

Vines and olives are cultivated to great perfection, amongst which are the "Oliena," and other noted vintages. Here too, from the luxuriant abundance of the mulberry trees, silk worms are kept in greater quantities than in any other part of the Island. and the silk is spun into fillets and bands for the hair: bees also are largely "cultivated," and honey and wax form important items of export production.

In the vicinity of the town are several "nurhags," and "sepulture di giganti," and one of the most perfect natural series of basaltic columns. The celebrated "rocking stone," and a fine natural grotto, almost equal to the far-famed grotto of Neptune, are also near Nuoro. Altogether it is a most interesting town to visit, and, when the Railway extensions are completed, it will be brought within a couple of hours of the main line. At present, though the roads are good, it takes a long day to travel there from Macomer, the nearest railway station.

Whilst at Nuoro, I had the opportunity of being present at a trial for murder of a highly sensational and dramatic character, for which five prisoners stood arraigned, an old man, two middle aged men, and two boys; the victim was a poor hard-working fellow employed in repairing the provincial roads, and he had been murdered for the sake of the small savings he was known to have accumulated, and to always carry about with him. From the evidence there could be no doubt that all the prisoners were present when the murder was perpetrated, but the two middle aged men alone were found guilty, and the old man and the boys were for some reason or other, acquitted.

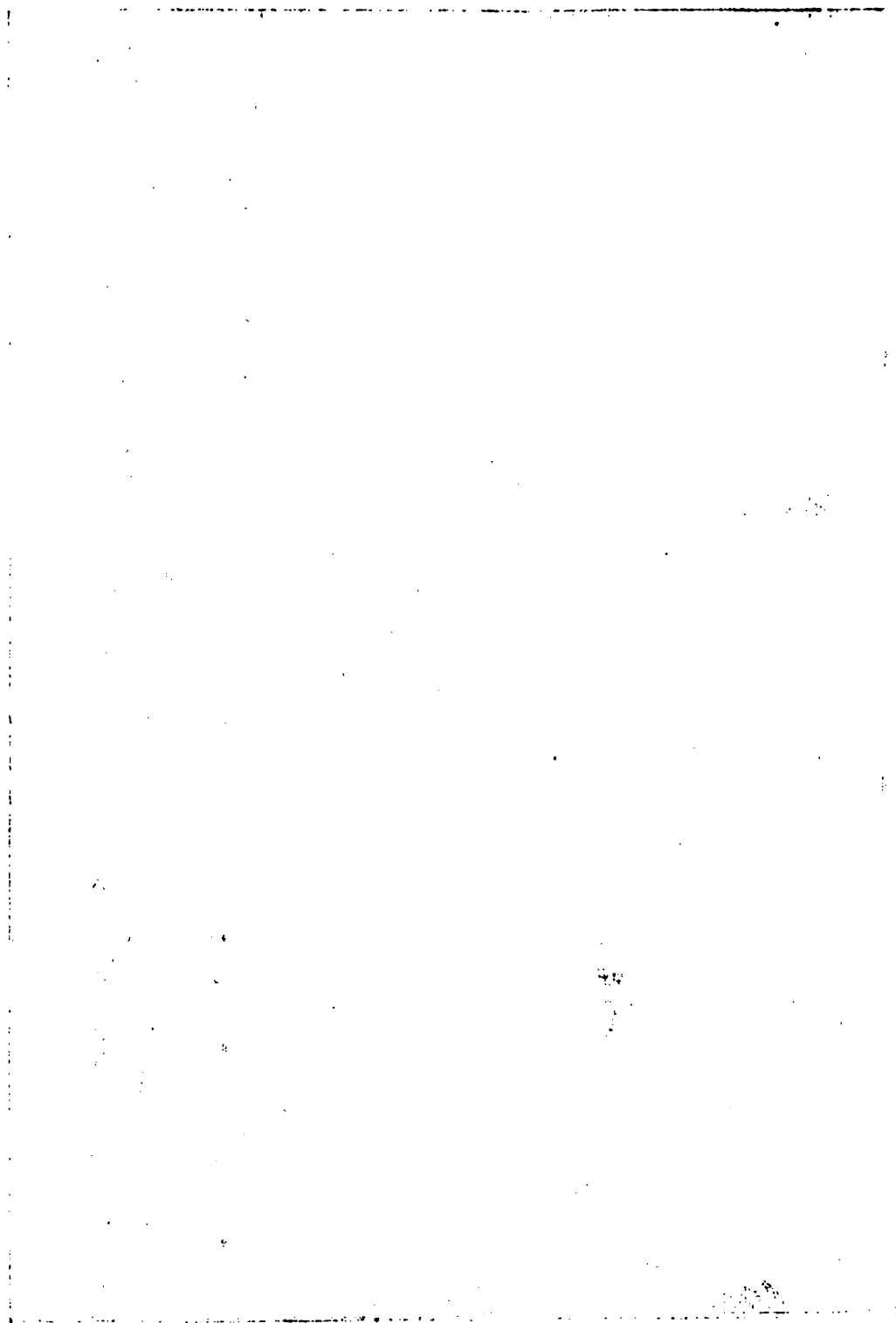
The proceedings in court were conducted most decorously, the three Judges, with the *Procuratore del Re*, occupying an elevated platform, seated on chairs and dressed in imposing robes. The advocates for the prosecution and defence (for all the prisoners were represented by counsel) were seated at a table below the judges; and the jury (twelve in number) were on the right of the court, and the prisoners were opposite them on the left; the latter were inclosed within an iron grating — not unlike the wild-beast cages at our menageries, — and were guarded by two *carabinieri*, of whom there were several others stationed at the entrance to the court, and in various other parts of the building.

The trial was most interesting and impressive throughout, the advocates on each side making telling speeches and the Judges listening patiently, and summing up learnedly exhaustively and impartially. After the verdict, which was unanimous, (though in Sardinia a majority carries the verdict) there was no demonstration. The old man and the boys, who had been acquitted, were set quietly at liberty, and the two condemned men were taken away by the *carabinieri* to their prison, shewing not much outward feeling at either their crime or their doom; knowing of course, as they did, that the verdict of death, which had been pronounced upon, them would not be carried out, and apparently not realizing the horrors of imprisonment for life, to which sentence it would be commuted.

Terra Nova was, until a few years ago, the northern terminus of the Sardinian railways, and was considered one of the chief sea-ports in the north. The harbour, however, was found to be so inconvenient, and so liable to be choked up by sand-banks, that the railway was carried forward, 20 miles further north, to Gulf Aranci, where there is an excellent well-protected deep-water harbour, with good anchorage; a large hotel and several houses have already been built there, and it will no doubt in time become an important town. The houses of Terranova are almost entirely of granite; the parish church is a handsome edifice, and the pulpit is a wonderful piece of wood carving. Outside the town are the



Village of the Pisan period.



ruins of an old Cathedral, said to have been built in the 9th century, but few traces of it remain.

Senorbi is one of the principal villages in the southern interior of the Island, and situated in the centre of the richest agricultural district. It overlooks the fertile plain of the Trecento, reputed to grow the finest wheat and other grain crops in Sardinia. Many interesting relics of the Roman period, chiefly pottery and coins, have been dug up in the neighbourhood, and an archaeologist or tourist could not choose a better place at which to establish his headquarters, as it forms the junction of the main roads from Cagliari, San Pantaleo, Guasila, Mandas, Laconi, and Lanusei; here also converge the various tracks from the mining district of San Basilio and the Trecento plain. It is therefore a busy centre of trade, and will form one of the most important stations on the new railway lines. Its church is of Pisan architecture and resembles most of the other village churches of the same period; it stands back from the Cagliari road, from which it is approached through an old Spanish porch of interesting and artistic design. Last though not least of the recommendations of Senorbi is the picturesqueness of the surrounding country which offers many pleasant excursions; and the excellence of its wine, and the jovial and ungrudging hospitality of its inhabitants, add to its attractiveness.

Oristano, which was built A. D. 1050 from the ruins of ancient Tharros, was formerly the "seat" of the "giudice of arborea", and is now a flourishing port and town.

The cathedral and archbishop's palace, erected A. D. 1228, are handsome and well constructed. It is recorded that in A. D. 1291 the Christians from Tyre, when their city had been devastated by the musulmans from Egypt, settled here; and the union of the church of Tyre with that of Oristano was effected a few years afterwards by Boniface VIII. In the cathedral are some good pictures by a modern Sardinian artist Marghinotti. The prison, in the "torre de mare", if it be a specimen of what the Sardinian

lock-ups " in the 18th , century were, is a terrible witness of the barbarous treatment of prisoners under the worst possible system.

Oristano was the favourite residence of the celebrated Eleonora, Guidessa of Arborea, and it was from here that she promulgated the famous code of laws, which were in force for several centuries, and are now the groundwork of the general laws of the Island. These laws are wonderful for their liberal and enlightened character in those days of darkness and oppression; they are embodied in 148 chapters, and a copy is to be seen in the public library at Cagliari, and will well repay perusal. Amongst other wise provisions, the penalty of death, which before had been the punishment for most crimes, was limited to cases of high treason, murder, high-way robbery with arms and force, and the burning of inhabited houses; and yet this Princeess, with all her high qualities of manly valour and surpassing wisdom, was a true woman at heart, and a staunch defender of the honour and interests of her sex. In the code regarding libel it was enacted, that if any one slandered a lady, by throwing doubts on her faithfulness to her marriage vow, he was, if the libel were proved to be false, subjected to a fine of £ 5, but if the libel were proved to be *true*, the penalty was increased to £. 25, *as the damage done was so much the greater*. According to Mons. Valery, writing in 1837, " *le mensonge, devient plus innocent que la vérité*,"; no doubt, but the end justified the means.

The history of this remarkable Princess would fill a highly interesting and most sensational and romantic volume, and there are ample materials extant. It is narrated of her, as another instance of womanly feeling, that, on the night previous to one of her greatest and most decisive victories over the Aragonese, she rode on horseback to Oristano and back (upwards of 80 miles) to see her son Marian, who was lying dangerously ill. This Prince succeeded his mother on the throne, but reigned only for a short period, and on his death, his father (the intriguing and faithless Doria), there being no direct descendant, hoped and expected to succeed; but the Sardes would not have him, and sent for the son of Eleanora's sister

Beatrice, William viscount Narbonne, who accepted the kingdom; but, on arriving at the Island with a small force, he was defeated at the battle of Santiano, and returned to France. A few years afterwards, in A. D. 1411 he returned with a larger army, took Sassari, and soon acquired sovereignty over the whole kingdom, and for nearly 20 years reigned in the Island; during this period, he instituted many salutary reforms, including the issue of a metallic currency; and coins with his name on one side and the badge of Arborea (a wide-spreading tree) on the other, are still extant. Soon after his death, which happened in A. D. 1332, the reigns of the legitimate "Giudice of Arborea," ended, and the "leadership" of the province was granted by the king to his viceroy, to whom was given the title of Marquis of Oristano; on his death his nephew succeeded, but without any warrant of the king, and in A. D. 1470, soon after gaining a great victory over the viceroy's forces at Uras, he suffered a disastrous defeat at the battle of Macomer.

The French besieged Oristano in the 15th century and took temporary possession, but were repulsed, or rather they retreated, through a singular stratagem which deserves mention. The forces which the Sardes were able to bring against the enemy were very small, but they mustered every available man, numbering altogether between 300 and 400. They assembled on the hill over-looking the town, near where the church of S. Giusta now stands, and marched continuously round the hill, and in and out of the Church. The French, watching these manoeuvres, and not suspecting the stratagem, supposed the Sardes to have an enormous army, and beat a precipitate retreat; they took to their ships, during the night, and in the morning the Sardes quietly re-entered into peaceable possession of their town.

This stratagem, though seldom resorted to in actual warfare, is often practised in theatrical performances, where countless warriors have to be represented by an inadequate supply of "supers,"; on these occasions the wondering spectators are under the same delusion as the credulous French at Oristano.

In A. D. 1647 Oristano was visited by clouds of locusts, unpre-

-cedented in size and numbers; they eat up all the ears of corn, and stripped all the olive trees, and committed such wholesale devastation as to cause complete dearth and desolation over the whole district. The calamity not only caused a famine, but was followed by the plague, which carried off nearly half the inhabitants of the town, and amongst the victims was the illustrious Eleonora.

Macomer has been previously referred to in connection with the many interesting Roman relics found there, but it deserves a further notice from its historical associations with times both before and after the Roman occupation, and from its being destined in the not distant future, to play a very different, but equally conspicuous, part in Sardinian history.

In its immediate neighbourhood are "nurhags," in greater numbers and in a better state of preservation, than in any other district; that of St. Barbara, situate about a mile South of the town is perhaps the best and most perfect in the Island. It is built of basaltic lava upon a trachyte foundation, and near it are several "sepolture di Giganti," and one of the most perfect specimens of the "perdas fittas," in the shape of six conical stones about four feet and a half high, and with the female breast clearly sculptured upon three of them.

Near to Macomer too is a natural phenomenon consisting of a large mass of basaltic rock, called "Monte Murale," from its close resemblance to a huge stone wall, and in the centre of the town are the ruins of an old castle whose date and history are unknown, but which now serves as the district prison.

Macomer was one of the seats of the "Giudice of Arborea," and also the scene of two highly dramatic incidents both of historic interest, the memory of which will not soon be forgotten by the Sardes. In A. D. 1347 the chivalrous Gerard de Cervellon stayed here, on his march to Cagliari with reinforcements for his father, who was then viceroy of the Island, and was attacked by the Sardes, headed by the intriguing Doria, and a bloody conflict ensued, in which the gallant Gerard, with all the flower of the Aragon and Catalan nobility, were slaughtered. It was at this town also that in

A. D. 1478 the Marquis of Oristano was quartered, with his army of 3000 men, on the eve of the disastrous defeat, which consigned that ill-fated nobleman, with his sons and brothers, to a life long imprisonment in Spain, and ended the "Oristano régime," in the Island. It is said that at this battle guns and canons were for the first time used in Sardinia.

Historically famous as Macomer has been in the past, it is destined to hold a more prominent position in the future. It will be the junction with the trunk line of all the various branches from the east and west coasts, all of which will converge and centre at this place, and in the future instead of being the site of royal seats and the scene of great battles, Macomer will be the central depôt of a large commercial and industrial community, and one of the busiest towns in the Island.

Porto-Torres is the principal sea-port in the north, and is distant about 13 miles from Sassari, with which it is connected by railway, and here steamers for the Italian Mainland and Corsica arrive and depart. The harbour, though small, is convenient and well-protected, and a considerable export trade in charcoal, oil, wine, and cork is carried on there. The town is built on the ancient site of the Roman "Turris," and was once the seat of an archbishop. The small river that empties itself into the bay west of the harbour is spanned by a fine Roman bridge of seven arches, and between it and the port are the ruins of a temple and basilica, on which is an inscription giving an account of its restoration in A. D. 1247. An aqueduct of Roman construction still supplies the town with water.

The church of S. Gavino (which is situate about half a mile from the port) was built from the debris of the Roman edifices in the 11th century. There are several sepulchral urns and sarcophagi in the crypt, which is surrounded by statues of the saints of that period, but none are of much merit as works of art. The church has two "apses," one at the east and the other at the west end, and the crypt underneath forms another church, where religious services are occasionally conducted.

Portotorres was almost destroyed by the Pisans from jealousy of the Genoese, and the inhabitants then retired to Sassari, and founded a new town there, which became a sort of republic under the protection of the Genoese, with the motto — characteristic of the proud and indomitable temperament of the Sardes — “ *mater et magistra, sed non domina.* „

The Islands off Sardinia, are principally on the west and north coasts, and, great and small, are almost innumerable; some are of considerable importance.

Maddalena Caprera and Tavolara have been already referred to, and of the other islands the most noted are S. Antioco and S. Pietro.

S. Antioco is the largest, and is connected with the mainland by an old Roman bridge or causeway; most of the houses are built from the debris of the ancient city of Sulcis, on the site of which S. Antioco stands, but many of the inhabitants still live in grottoes on the side of the hill beneath which the town stands, and which were probably once sepulchral caverns.

S. Pietro almost adjoins S. Antioco on the north, and is separated from the mainland by a gulf about five miles wide. It was the “ *Accipitrum insula* „ of the ancients, but became entirely depopulated in the middle ages. Its present inhabitants are the descendants of a Genoese colony, who, in A. D. 1757, settled here when they had been ransomed from African slavery by Charles Emanuel III, who gave them the Island for their future home.

In this Island there is a species of palm, which grows in great abundance, and which is used by the Sardes for threefold purposes. Its leaves are manufactured into brushes, its heart or core is eaten and tastes not unlike an artichoke, and its fibre is spun into ropes for the nets in the tunny fishing, the most important of which is carried on in the neighbouring gulf.

CHAPTER XV.

Miscellaneous — Mineral Springs — Natural Grottoes — Rocking Stones — Roads — Hotels — National Games — Horse Racing — Tirai de Pei — Sheperds Hut — Ballo Tondo — Music — Postal and Telegraph Service — Vendetta and Reconciliation — Similarity of Words — Guide-Books — Correction of errors.

Sardinia, though not bountifully supplied with water, is yet prolific in hot and cold mineral springs, which have valuable chemical and medicinal properties. In any other civilised country they would be highly prized, and turned to profitable advantage, not only commercially, but for the good of the community in the general alleviation of sickness and infirmity.

The characteristic apathy of the people displays itself in this as in other things, and the consequence is, that the benefits, which might be extended to thousands of suffering human beings, are limited to the very few, who have strength and energy to brave the dangers and discomforts attendant on a pilgrimage to the springs, in the confident assurance of the benefits to be derived.

Apathy in this case is the more to be deprecated, as well as wondered at, when it is known that these springs, from their chemical composition, are peculiarly beneficial in the cure of those very ailments to which Sardinia is specially subject, viz; ague, fever, liver complaints, and rheumatism. It would almost seem as if they

in the non-visiting period ; but a very vivid description of it is given by Mr Tyndall, who had the opportunity of seeing it under exceptionally favourable circumstances, when it was visited by the King of Sardinia about 40 years ago, and I extract the following passages, which cannot fail to be interesting.

“ The first vaulted cavern, forming an antechamber 30 feet high, has no peculiar beauty and here we embarked in a small flat-bottomed boat and crossed into a second cavern, in which there was 20 feet of beautifully clear water ; we then reached another cavern, with a natural column in the centre, the shaft and capitol of which, supporting the immense beautifully fretted roof, reminded me of the chapter house at Wells, and the choir of Christchurch Oxford. It stands, the growing monument of centuries, in all its massive and elegant simplicity, with few other stalactites to destroy its noble solitude. ,

“ The vista of caverns through which we had passed, and the feeble struggle of the few rays of day light contending with the victorious blaze of 3000 candles placed in all parts of the gigantic abyss where we stood, were reflected on the unruffled lake at our feet, while the roseate tint of the carbonate of lime gave a warmth to the whole scene. ,

“ Opposite to us was a diminutive mountain, on the summit of which, a row of lights, arranged expressly to illumine the overhanging roof, gave to the small stalactites in the distance the appearance of icicles of a frozen fountain ; and to our right hand were columns of enormous and bizzarre construction, from 50 to 60 feet high, with recesses and projections of every variety. ,

“ In parts of the grotto were galleries and corridors, 300 and 400 feet long, reminding me, if such comparisous be allowable, of the Moorish architecture of the Alhambra. ,

“ Opening from one of these is a small chamber, the ceiling of which is entirely covered with delicate stalactites, and the sides with fretted open work, so fantastical that one might almost ima-

-gine that it was a boudoir of the oceanides when they amused themselves with making merry. „

“ Some of the columns in different parts of the grotto, are from 70 to 80 feet in circumference, and the masses of drapery, drooping in exquisite elegance, are of equally grand proportions. „

Mr. Tyndall adds; “ on returning home, I endeavoured to make a comparison with the grottoes of Adelsberg, Paros, Antiparos, Cerigo, Ithaca and others which I had previously seen. „

“ At Adelsberg, the chambers are in some parts loftier, and the existence of the Proteus Anguinos, the extraordinary link between the fish and serpent is a point of peculiar interest, but with these exceptions. the balance of beauty is decidedly in favour of the Sardinian grotto. Those of Paros and Antiparos are neither so extensive, nor equal in elegance and rarity, and none in other countries admit of any comparison. „

“ A night on Vesuvius, during one of its greatest eruptions, has always been impressed on my memory as the finest spectacle I ever witnessed, but the grotto of Neptune is equally magnificent. The former is one of nature's children raging in violence and fury, the latter is one sleeping in silence and tranquillity. „

Another remarkable grotto is the grotto of San Giovanni near Iglesias. It is a natural tunnel, running under the mountain of San Giovanni, and is nearly $1\frac{1}{2}$ miles in length, varying in width from 50 to 150 feet, and in height about the same. A stream of water runs through it, which appears and disappears at intervals.

An excellent carriage road has recently been constructed through the tunnel, which is a great convenience, and obviates the necessity of going over the top of the mountain, where the old road formerly went. It is necessary to have torches in passing through it, as, after the first 100 yards at each end, the tunnel takes a turn, and beyond these points it is quite dark. It so happened on the day I was there, that several carriages and carts were passing through, as also a small detachment of carabinieri, who were accompanying the cashier of the S. Giovanni mines, in charge of the month's “ pay, „ (which amounted

to a considerable sum) and as all had torches, the stalactites and crystallizations were seen to great advantage. On the right and left are several side galleries, and a fine grey marble in many places forms part of the natural wall.

A barbarous murder was committed in this tunnel about two years ago, and the body, which had been thrown into one of the galleries, was not discovered till several months afterwards, and the murderer is still unknown and at large.

It was curious to observe that the swallows, which frequented this grotto in great numbers, never flew beyond the curves where the day-light extended, and their nests were all built in the space between the entrances and the curves.

There are many other natural grottoes in the Island, but none of equal size or importance with those of Neptune and S. Giovanni, except one recently discovered near Nuoro, which however I was not able to visit, nor could I obtain any reliable description of it.

Amongst the natural curiosities of the Island must be mentioned the "rocking stones", of which there are several; the largest and most perfect is situated about a quarter of a mile from Nuoro and known in the country as the "pietra ballarina", and called by La Marmora, "la pierre dansante." It is a polyhedron varying in the length of its sides from 3 to 16 feet, from 5 to 14 feet in width, and in height it is 12 feet. Its circumference is about 45 feet and, notwithstanding its great weight, it is easily moved with one hand, and, when on the balance, it sometimes "hangs", for a considerable time before returning to its equilibrium, and might with the greatest ease be altogether upset. The rocking stone itself, as also the stone on which it rests, are of granite, and appear to have decomposed on each side at the foot equally, and thus a perfect equilibrium has been obtained. The largest rocking stone in Cornwall is, I believe, rather less in size than this at Nuoro, being 17 feet in length and 32 feet in circumference.

Drummond in speaking of these rocking stones, says. "Some of them still exist in Britain, and the Britons were probably taught

“ how to raise and place them by the Phœnicians „; and, if these stones are really works of art, and not produced by natural causes — as to which I offer no opinion — no doubt the knowledge of making them was obtained by the Sardinians from Phœnician sources.

Sardinia, since the Roman occupation and until forty years ago, had only one main road upon which a carriage or even a cart could travel; viz, the national road which traversed the whole Island from south to north, uniting the two capitals and passing through Oristano and Sassari to Portotorres, a total distance of about 250 miles; but now every town is in direct communication by good roads with the two capitals, as well as with each other, and the aggregate length of all these roads is over 1500 kilometres.

Besides the national roads there are provincial and communal roads, connecting every large and small village with the national system, and in addition there are the old horse tracks making “ short cuts „ through forests and over mountains, where a road either for carriage or cart is impracticable.

The “ national „ roads were made and are repaired out of the imperial purse; and the total cost of construction is said to have exceeded 15 million lire (£. 600,000 sterling); they are 36 feet wide, and generally have a grass margin on each side, about 12 feet in width. The gradients very seldom exceed 1 in 10, which, considering the rough mountainous character of the country, is very good engineering, and much superior in that respect to many of the best roads in our own country. They are well macadamized, sloping from the “ crown „ or middle, and with wide ditches on each side, and they are kept in very fair order.

The reparation of the roads is let every 3 years by contract, and the average letting price is about 200 lire per kilometer per year. This contract price will doubtless sound very small in English ears; but it must be borne in mind, that “ road material „ in Sardinia is not only good and lasting, but very cheap, being easily got, and within a short “ lead, „ and further, that the traffic, and consequently the “ wear and tear „ are very slight.

The provincial roads, which have an aggregate length of about 1000 kilometres, were made, and are kept in repair, out of provincial taxation; they are narrower, by one third in width, than the national roads, but in other respects are equally good, and the annual cost of reparation per kilometre is about the same.

The communal roads stand in a rather different category, both as to original construction and repairs; but generally they may be said to have been well engineered, and to be kept in fair order. The cost of construction and repairs is paid by the Communes through which they pass, and out of local taxation.

Along the national and provincial roads, at intervals of about 6 kilometres, are houses called "Cantiniere", where the men, employed in the repair of the roads, are lodged. They are also used as places of rest by travellers, for whose accomodation there is a large room specially set apart, having benches and tables where they can take their meals and rest, and, in case of emergency they can remain for the night.

There is a good supply of pure water at each house, not only for the inmates but for travelling horses, and for the latter there is also capital stabling; these are no small advantages, where inns are few and indifferent, and water is scarce.

To the poor these houses are an invaluable boon, as no charge is made for the accomodation, and the alternative would often otherwise be resting and sleeping and taking their meals "al fresco", in all weathers and at all hours.

The persons in charge of the cantiniere are allowed to sell bread and other necessities, and the prices are most reasonable, but no spirits or wines are permitted to be sold; travellers, however, can bring with them such eatables and drinkables as they desire.

There are no turnpikes, and consequently no levying of tolls, in any part of the Island.

The hotels in the cities and towns, and in the country districts, have been much improved of late; fifty years ago hotels were "few and far between", and scarcely worthy of the name. They were

only three in number; the hotel at Cagliari was a "locanda", on the 3rd floor of a small house in a narrow street, and at Sassari there was a small boarding house with a table d'hôte, and the third was at Alghero on the 2^d floor of a wretched dirty hovel.

In most of the towns and large villages there was, however, an "Osteria", — half house, half stable, — frequented by the "viandanti", who are the commercial travellers of the Island. The accomodation was of the poorest and roughest sort, but the charges were proportionately low. This absence of public accomodation necessarily led to private hospitality being extended to all travellers above the rank of "viandanti", and a stranger without even an introduction would in the present day be a welcome guest at the house of the priest or syndic at any village, where there was no hotel accomodation; now, however, not only in the cities, but in all the principal villages, comfortable quarters at moderate charges may be had. A licence is necessary for the sale of wine and liquors as in England, the granting of which is with the syndic, in whose power it solely rests, and he is restricted in his discretion only by the number of the population, the proportion must not be larger than one public house to every 300 inhabitants. A small charge is made for the licence, but no annual payment is exacted, nor are the houses subjected to any police, or other exceptional, supervision. There are no distinctive signs or names to the inns such as we have, but in towns the national flag, and in the country the branch of a tree (generally a willow wand), are suspended over or at the side of the door. Though, however, there is no outside designation, there is often a very significant one inside; and at a small inn at Quarto, which I visited, there was a gorgeous cock painted on the wall of the public room, with the following words, in equally gaudy colours, written beneath:

Quando questo gallo canterà allora credenza si farà.

(When *this* cock crows then credit will be given).

The charges are most reasonable; indeed compared with our English hotel charges they are absurdly low. At one of the best

hotels in Cagliari, a good bed-room, with tea or coffee in the morning, “ colazione „ consisting of fish entrées roast and other hot dishes, and “ pranzo „ in the evening comprising similar viands and cheese wine and dessert “ ad libitum „ with attendance included, can be had for 100 lire a month, which is equal to about three shillings a day. For a shorter period, or for a single meal, the charge is equally reasonable, 2 lire being the price for a colazione or pranzo, 3^d for a bottle of wine, and 4^d only for a “ brandy and soda „. The charges too are uniform, not regulated by the quantity consumed, nor by the appetite of the customer, as in some of the new cities in the western states of America, where I have seen painted on a conspicuous sign-board *outside* the hostelry, the following announcement:

| | |
|------------------------------|-----------|
| A square meal | 50 cents. |
| A good square meal | 75 cents. |
| A mortal gorge | 1 dollar. |

The postal and telegraph services in the Island are Government monopolies; both are efficiently conducted and the rates, except for letters within the Island, are reasonable.

There is a daily postal service from and to the Continent, and in the cities there are several local daily deliveries. The stamp for a foreign letter, not exceeding in weight 15 grammes is 2^d 1/2, and for letters in the same town the charge is 5c, but for other Italian letters, whether for Sardinia or the mainland, the charge is 2^d, which seems disproportionately high compared with foreign postages. The Parcel post is in force and is much used, the charges being most moderate; for Italy the charge is 5 centimes for every 2 oz up to a weight of 7 lbs., for which 50c is charged. Postal cards are much used — the charges being 10c for both Italian and foreign cards. In case stamps are not previously fixed, double charges are made. Letters and parcels can be registered at a uniform charge of 50c, whether for the same or other Italian towns or abroad.

Letters are carried by railway or public conveyance to and from those towns, which have either of those means of communication. To other towns and places, the postman either rides on horseback

or walks; *every house, wherever situate, has a right of delivery* of letters and parcels free of extra charge.

Telegraphic messages are carefully and expeditiously forwarded; the business is not large and one wire is sufficient. This wire is stretched along poles about 100 yards apart, and is carried either along the lines of railway, public roads, or "across country," according as the route or direction is nearest or least expensive.

The charge for an Italian message not exceeding fifteen words is ten-pence; for foreign messages the prices of course vary considerably; to England it is 4^d per word.

In case of miscarriage of letters or telegrams there is, as in England and most other countries, practically no redress.

It is stated that the revenue from the Post and Telegraph services yields a handsome surplus, but the particulars are not published or known.

The "Ballo tondo" is the "national dance" of the Island and admits of any number of participants and is not unlike the dances described by Homer, and practised in some parts of Greece at the present day. It commences by joining hands and forming a circle and "winding" to the left, with a step rather difficult to describe, and equally difficult for a novice to perform.

First there is a steady side-slide of the left foot, and a sudden jerking or drawing up of the right after it, the right foot passing over the left, with occasional stamps on the ground. It reminds one rather of the polka step, but with many variations. When the circle is in full swing and number, the dancers advance and recede with "leaps and bounds" towards the centre, where the musicians stand, and occasionally break out into wild shouts and gesticulations, to which the screeching and jumping of the Highlander in a Scotch reel are child's-play, and then they gently subside again into the regular circle, with the polka-step as before. Perfect silence, however, generally prevails, and dancing is continued with a formality and seriousness more befitting a funeral than a festival, until some dancer, diverging into a strange wild step, performs a solo, the circle meanwhile con-

-tinuing its dance. This goes on for hours, the circle perpetually changing, fresh dancers joining and old ones retiring.

A knowledge and practice of Sardinian etiquette are necessary when engaging in this national pastime; for, though no formal introduction to your partner is necessary and you take your choice, yet unless dancing with your fiancée or a married woman, you *never join hands*, and woe to the man who takes the hand of any female, who is engaged to another, or to whom he does not intend or is not prepared to take as his "partner for life".

In music, vocal or instrumental, the Sardes cannot be said to excel; the national instrument "lanedda", is supposed to be the same instrument as the flute of mythical and classic fame used by "Pan", but, if so, this high musical genius must have had a better knowledge of the instrument, or been more expert in its use, than the Sardes of the present day, or he never could have achieved the miraculous results that are ascribed to his performances. The only miracle in connection with the instrument in the present day is the extraordinary power possessed by some of the players, who have been known to "blow", for several hours without ever taking the pipes out of their mouth, or rather their mouth from the pipes, and where all the breath comes from is a puzzle, which has never been solved.

Perhaps, however, the monotony of the music, varied though it is by solos and choruses, given by voices generally inarticulate, and coming, as it were, from the stomach, and further varied by the hand being placed wholly or partially over the mouth with a sudden blow and jerk, may have made the time of blowing seem longer than it really was, and I am bound to say that the performer shewed no apparent symptoms of collapse.

Perhaps too my ignorance of the science of music, and my non-appreciation of it in its highest and classical features, may have contributed to the conclusions I arrived at, and the Sarde music may be scientifically amongst the finest in the world. Indeed I am, as regards music, in the same position as a well-known English lady,

who neither knew nor cared for music, and who was married to an equally well-known Scotch " laird, " — but he was deeply versed in the science and his well-taught ear could detect the slightest departure from exact rules — and, when observing the excruciating torments depicted on her husband's countenance at some false note which jarred on his sensitive perceptions, " thanked God she had no ear for music ". Neither the lady nor myself were however in quite so deplorable a condition, as the " barbarian, " who knew only two tunes " *one of which was the old 100th and the other was'nt* ".

The vendetta — which from time immemorial has been indigenous in the Island — has now most fortunately almost entirely died out, and is seldom resorted to. It was the result of a feeling that justice could not otherwise be obtained, and there can be but little doubt, from the records of corruption of the judges, and the mal-administration of the law, in times past, that there was only too much truth in this conclusion.

Forty years ago there was scarcely a commune where several of its inhabitants had not been driven to the mountains and forests and lived there a life of plunder and robbery, not daring to return to their homes for fear of being caught and imprisoned; indeed there are instances on record where whole villages have fallen victims to this merciless method of obtaining justice or seeking revenge. It is narrated that in the *Ogliastro* district, an entire village was depopulated in a most tragic manner. A very beautiful girl, called Elena, had many lovers, but could not make up her mind whom she would select; one of the lovers determined to be the favoured swain, or to cause a general " Vendetta, " and accordingly one day, when she was going to church with her friends, he roughly kissed her in public. This outrage was, as a matter of course, in the usual way resented, and could only be atoned for by immediate vengeance; arms were at once resorted to, and at the first onset upwards of twenty persons were killed and many more wounded; the whole village then took up the quarrel and the result was that the fair Elena died in the arms of her mother, when she heard that her father brothers

and all her male relatives had been killed. The deadly contest was carried on till the few survivors left the village to escape the misery of isolation, and the village itself was deserted and destroyed.

The "banditti and fuorisciti," were driven originally to the mountains, by being accused with the commission of some crime, of which they were innocent, but, whether guilty or innocent, they seldom committed violence on strangers, and took only what they needed for their immediate necessities. Their families and relatives, with whom they kept up constant communication, supplying them while absent, with all they required; they lead a wretched existence concealed in the forest and mountains during the day, and issuing only at night, for though not actively hunted down by the carabinieri, and guards of the forests, yet, if seen, they would be arrested and brought to justice. The total number of these outcasts from society does not exceed a score at the present time, and most of them are advanced in years and might safely, and as a matter of policy he allowed to return to their houses and families.

In former times — when vendetta was in full force — occasionally but very rarely the feud was amicably settled, and a most formal and elaborate ceremony was then enacted. A Sarde author has given a full description, which is interesting in itself, as well as characteristic of the Sarde temperament and disposition; it is as follows.

" After sundry negotiations, either of reliable and disinterested persons or of some respectable ecclesiastic, the difference is composed; the respective interests are provided for, and then the place of reconciliation is named. This solemnity usually takes place in the open country near some Chapel lest some of the parties should be guilty of foul play. On the appointed day the two factions with their friends and kindred meet, all are under arms, as if for warfare, and all at a certain distance from each other and observing many precautions indicative of distrust, and silent and gloomy, as if averse to any thoughts of peace. The arbiters and "pourparlers," are placed in the centre, passing between the parties to ascertain if anything new has occurred, and that there is no retracting of previous deli-

-berations, — and in case any difficulty may have arisen, they studiously labour to remove it “so that both parties may be prepared for the fraternal embrace. The priest then appears. At the sight of the crucifix in his hands, their arms are lowered and laid down, their heads unbonneted, and the offended party on the right, and offenders on the left, advance towards each other. The holy man mounts upon a stone, and, descanting upon brotherly love and the duty of forgiveness, holds up the example of Christ, who prayed for his murderers, shews the necessity of reparation for wrong, and after referring to other appropriate matters, terminates an affecting exhortation for them to disarm and embrace each other.”

“Great is the display of passion when the factions from both sides approach the priest. Their eyes flash, countenances turn pale, groans of fury and rage are heard from men women and children, who see before them the murderers of sons fathers and husbands; but the Gospel words invoke better sentiments in their hearts, and a struggle of divers emotions ensues; soon the sullen brows are cleared up, the menacing eyes lowered, looks cast down, sighs and sobs break out, and the sounds of ferocity and horror change to those of peace and tenderness. The agitation is at its crisis when the offenders, after embracing the crucifix, turn to present themselves for pardon. They, who at first stood regarding their enemies with perverse pride, now turn pale, and, with slow and trembling steps, advance to the offended parties. Roused to the height of passion by the approach of one stained with the blood of some beloved friend, he almost hesitates to receive him, but a deep groan is heard, and he opens his arms for embracing his enemy with the words “*Dio el perdonas*,” and gives the kiss of peace. Those of his faction do the same in succession, whilst others with tender words accept their friendship, and the women, who till now have been trembling for their loved ones, shed tears of joy, and give thanks to God, but those whose hearts have been too deeply wounded, though they abstain from their accustomed imprecations, howl inconsolably and mourn their beloved and lost relations. The general joy fails to illumine

their brows, immersed in the darkness of tender sorrows, they continue to pour forth their lamentations. These duties performed, they all assemble at a joyous feast, as though the memory of the past was entirely obliterated, they behave toward each other with the regard and cordiality of a family united in the most sacred love, old affections — quenched by the intermediate enmity — are renewed, the young people meet again with delight the once dearly-loved objects, words of love are renewed, promises redeemed, and vows repeated „.

“ To establish the peace more firmly the chiefs on both sides propose marriages, maidens receive the faith of those who now first begin to love, or give their hands to former lovers. Parents pledge themselves for their little ones, and promises of sponsorship are given and renewed. In the meantime guns and pistols are discharging their harmless balls into the air, and dancing and singing and every kind of rejoicing becomes general, except where amongst the shadows of the trees, a few inconsolable women are weeping in solitude. The scene closes by an exchange of gifts and separating with every demonstration of friendship, they retire to their respective villages..

The peace thus established is generally perpetual, and the conditions are strictly observed, and, in addition to the foregoing celebration, there is another and equally imposing ceremony enacted, by which the most influential and important member of the offending faction binds himself by an oath to prevent in private any injury that may be attempted by any of the party, and, if he fails to do so, the injured individual may revenge himself on him.

As a rule however, the Sardes are little disposed to trust to either clerical or legal interference in their disputes, they prefer private arbitration “ by their peers „ which is, by all accounts, a most satisfactory and impartial tribunal; when a quarrel occurs, the most respected elders are called in to arbitrate, and the respective parties being assembled with their witnesses, and having tendered their evidence and made their statements, the discussion is closed by a clear and immediate judgement. An appeal lies from them to a similarly constituted court of inquiry, but having a greater num-

-ber of " good men and true , and their decree is final. The good they effect in preventing quarrels and lawsuits is illimitable, and all the reward they get is the general esteem in which they are held. This tribunal is in principle the same as private arbitrations in England, but with this essential difference, that the former is simple and inexpensive, and the decision is prompt; whereas in England the proceedings are costly and protracted indeed in nine cases out of ten a lawsuit, with a trial in open court, is generally less expensive and more satisfactory.

One of the Sarde " national games , is a species of wrestling, and is called "Tirai de pei, but it is a very different "pastime,, and conducted upon rules very different from those in force in Cumberland Lancashire or Westmoreland; indeed it would be more correctly termed "kicking , than "wrestling. The two competitors approach each other, each having two friends — their seconds — on whose shoulders they rest their arms, so as to preserve their equilibrium, while they try, by kicking, to knock each other off their legs, which are protected by thick leather leggings; the injuries and bruises are sometimes very severe, and this "game , goes on indefinitely, till one or both are wearied out, when the amusement ends; but no one seems to know which has been the victor.

Football is played in a sort of fashion in the Island, but in a very mild way, and hands are used instead of feet; " marbles , too are played, — both " ring , and " hole , — and not unlike the game of our boy-hood; but cricket and tennis are unknown.

Mr Tyndall says " The Sardes almost always sleep naked, married or single, and no matter, how many may be in a bed, father " mother and children, all are in a state of complete nudity, a practice I had several opportunities of witnessing,. This, however, is a custom, which I never saw or heard of, and, like many other Sarde practices, it must have fallen into desuetude. My experience as an eye witness may not of course have been so extensive as M.^r Tyndall's, yet I have on several occasions had to intrude into the family bed-chamber, and instead of the state of nature in which, according to

this author, their slumbers were enjoyed, I found the condition of things exactly the reverse, every member of the family having on the whole of their clothes, the male sex being adorned even with the boots and shoes they had worn during the day. Indeed it is generally supposed that, as a rule among the lower classes in Sardinia, articles of clothing are never taken off or changed, so long as they will hang together.

On one of our shooting excursions — which occupied a couple of days — the shepherds hut, where we stayed for the night, may be taken as a fair specimen of a forest habitation. It was constructed of dried turf and straw, having a covering of brush-wood and cork as a roof, and some heavy stones at the top to prevent its being blown away. It was about twenty feet square and twelve feet high, and had a very low door in the middle of the south side. There were no windows except a small aperture without glass or wood.

The natural soil formed the floor, and in one corner lay a rude mattress, stuffed with heather and leaves, which was appropriated as a bed for the parents of the family, and in another corner were bundles of reed-mats sheepskins and deer-skins, which at night were drawn in a circle round the fire, and formed sleeping accommodation for the rest of the family, and for strangers — who on this occasion numbered fifteen and were supplemented by as many dogs — ; the fire was in the centre of the room on the floor in a hole, a few inches deep, and about three feet in diameter. Chimney there was none, and the smoke, after blackening the rafters and walls, escaped either through the small aperture which formed the apology for a window, or through the numerous holes in the roof and around the door. Across the rafters were arranged transverse shelves of wood and reed lattice work, on which cheeses, made from the milk of sheep, were placed to dry and at the same time to acquire a smoky flavour that is highly esteemed.

Along the walls, and on the floor, were hollowed trunks, or rather shells, of trees (principally cork), about two feet high and one and a half feet in diameter, filled with corn and other family stores;

and cheeses of various sizes and shapes, and in different stages of manufacture, were also scattered about the dwelling.

The household and cooking utensils — home-made and of the roughest description — were all formed out of cork bark and split reeds, excepting the instrument used for roasting the meat, and this was a long iron rod, on which pieces of flesh (each about a pound weight) were spitted, and the rod was held over the fire and turned with the hand. There was no table or cup board, and two or three stools, made of sawn logs, served not for *seats*, but as *stands* for milk-pails. The custom of sitting on the ground is universal and indeed is almost a necessity, as they thus, to some extent, escape the dense smoky atmosphere that fills the upper portion of the room.

The dress of the women of the family — the mother and two daughters — consisted of a light green cloth bodice, fitting closely to the figure, with a narrow red edging, and the petticoat, of coarse dark purple cloth, had a broad red border of the same material. Shoes, stockings, under petticoats, and other customary articles of female attire, were things either unknown or deemed superfluous, but their absence shewed to greater advantage the natural grace and elegance of the shapely figures.

The use of the fists, or the “noble art of self-defence,” is not resorted to in settling disputes in Sardinia; knives and guns being substituted for natural weapons, but they are now seldom used, indeed quarelling in Sardinia seldom gets beyond the stage of an interchange of angry words and violent gesticulation. Drukenness, the cause of nine-tenths of our “street rows,” is the rarest possible spectacle, but this again may arise, not only from the natural sobriety of the people, but from the fact that it is difficult to produce that condition from the liquors of the country, however freely indulged in. I was however once witness of a hand-to-hand encounter at Cagliari between two cart drivers, and the open palm was, after the fashion of women in a certain class of society, then used, but it was soon supplemented by vigorous kicking, and immediately followed by the combatants closing in, and falling down upon each

other, and rolling on the ground; then teeth came into play, and the fight eventually concluded in their separation by the carabinieri. It was then found, that one of the warriors had an ear and the end of a finger completely bitten off, and that the other had received frightful gashes from bites on the arm and shoulder, which in some places were laid bare to the bone; and both were covered with blood and mud, and utterly prostrate and exhausted. They were carried to the hospital and it was said that it would be several weeks before either victim could be discharged.

Horse-racing in Sardinia may be classed as one of the two great national sports (the "caccia," or chase being the other); and it is carried on both in town and country. In town the narrowest and most slippery streets are selected for the course; and in the country the steepest stoniest and worst road is generally the chosen ground.

Formerly, and within the last thirty years, from four to six riders on as many horses used to start together, with their arms interlocked, so that quadrupeds and bipeds formed one body; and thus linked together, they galloped over the streets and lanes at a terrific pace, and the merit in the race consisted in all arriving together at the goal *as they had started*; but so dangerous had the sport become, when carried on in this fashion, that it was put a stop to by Government, and now each horse has its own rider, and they ride the race separately and independently of each other, This however is scarcely less dangerous, as they gallop at the same reckless speed down the slippery streets and rocky roads, with no saddles, and very often without bridles or stirrups, and using both whip and spur freely. It is a hazardous amusement; hardly less so to the spectators, who line the streets, than to the jockeys, who are lads between twelve and fifteen years of age. The races are run in "heats," or courses, and the horse that first passes the post, in the greatest number of courses, and *whether with or without a rider*, wins the prize. In some districts the riders carry guns under their arms, with the muzzle pointed towards the ground; and

the " racing sportsman ", who along the rocky roads keeps his gun best in position, and so arrives at the post, though he may not be " first in ", is declared the winner. It requires great art and practice to ride over these courses in this position, but the Sardes are almost as expert and daring on horseback as the Arabs. In some of the religious processions, the horseman nearest the " sacred image ", rides, facing the saint, " and reining back ", his horse, with wonderful skill, and horse and man parade through the town in this manner, with more grace and ease than many a practised court-official can retire backward from the presence of Royalty.

These races take place frequently and periodically, and are always looked forward to with great interest by all classes. The balconies of the windows in all the town houses are filled with ladies dressed in their gayest costumes; and the men throng the streets, all cheering shouting and gesticulating in the highest state of excitement. These " sports ", as racing in our own country, are supposed to have been instituted for encouraging the breed of stout and fleet horses; and no doubt they have that tendency; but the previous training is not very severe, nor do the winning horses appear to derive any great special commercial value from the superiority shewn by their victories. Mares are not allowed to compete in any race; it is forbidden by express law.

The qualities required for a jockey are pluck and dexterity; and some of our crack riders would be " as much nowhere ", in Sardinia, as a Sarde rider at Newmarket. The so-called risks and dangers to which our jockeys are " exposed ", from the " ugly rush ", at Tattenham corner in a crowded Derby, or in the Chester cup when they start " five deep ", are child'splay compared with the continuous break-neck headlong helter-skelter reckless fashion in which Sarde races are run.

It may be mentioned here, that in " mounting ", whether in racing or ordinary riding, the rider, — there being generally no stirrups — selects some rising ground, or other point of advantage that may be near at hand; if there be no such position he " scrambles

“ up any how „, and never vaults on to his horse, as might easily be done, seeing the animal very seldom exceeds $14\frac{1}{2}$ hands in height. This mode of “mounting„ seems to have been an ancient custom in Italy, as all along the Appian Way, and other old Roman roads, are “ stones „ at certain intervals, that have evidently been erected and used for this purpose. In Sardinia too, as in other parts of Italy, where, as occasionally happens, saddles are ornamented with stirrups, the rider mounts on the right or “ off „ side, „ using the right foot; and not on the “ near „ side, and with the left foot in the stirrup, as is the practice in England.

There are seven Newspapers now published in the Island, two of which are “dailies„, one at Cagliari and the other at Sassari, and five are weeklies, published at the Capitals, and in the towns of Tempio and Lanusei.

These papers are as a rule cleverly and soberly written, and well-informed, and all shades of politics are represented. Some are what we should call “ liberal conservative „ in tendency, and give their full support to the present Government, and others represent the discontented element, though their exact political colour it would be difficult to define. There are at present no illustrated or comic papers in the Island, though the last humoristic paper (which died about 10 years ago), the “ Buonumore „, was clever and amusing.

There are several printers both at Cagliari and Sassari who also publish, and the history of Sassari in two large volumes, recently published at Sassari, and written by Sig. Enrico Costa, a clever poet and successful novelist, is an elaborate and careful work, handsomely got up, and worthy of our best publishers.

The similarity, or rather identity, of some of the Sarde words with words in the Greek and Latin languages is most remarkable. A shell is “ conca „ in Sarde, and “ κογχος „ in Greek; a boundary, is “ oru „ and ορος; image is “ icona „ and εικων; limit “ is orizo „ and οριζω; to see is “ ido „ and ειδω; the breast is “ titha „ and τιθη; and it is somewhat curious that the first and last of these words have been anglicized, and retain the same signification; the

one, "conca," or "conk," being used in "prize-fighting," parlance as denoting the head or shell; and the latter, amongst the lower orders in the northern districts, signifies in common language those portions of the maternal frame, which supply children with their natural food in early infancy. Latin in some parts of Sardinia is, as we have seen, the common language; and among every class in the island "bona dies" (good day) is an ordinary salutation, and "via" (a way) is the signal for a sporting dog to "be off," the latter may be said to be literally and figuratively dog-latin, in every sense of the word. Several Carthaginian and even German and Russian words are also used; though how the two latter came to be adopted is a puzzle, as, in all its various vicissitudes, Sardinia was never mixed up either historically, politically, commercially, or socially, with either of those countries.

Some of the Sardes, especially amongst the upper classes, rather pride themselves on their acquaintanc with foreign languages. A few specimens in English, which came under my own observation, will best illustrate the extent of this knowledge, and the incidents are in themselves amusing.

When starting on a "caccia grossa," the brother of my host, who had married an English-speaking lady, from whom he thought he had acquired a perfect knowledge of the language, gave me as a parting salutation: "I wish you dead to-day." This did not sound very pleasant or congratulatory, and I pondered long over the meaning, but I was not able to fathom its depths, until it had been explained that he intended no evil, and was merely expressing the hope and desire, that I should be the person to kill the first wild-boar during the day's sport.

On another occasion at a consultation of mining engineers, when the desirability of an important operation was being discussed, on appealing to one of them for his opinion, I received an answer in these words. "I think, as usual, of myself." Now, as he was one of the most modest and retiring, and the least egotistical "professional," whom I ever met, I thought the answer strange; but

I afterwards ascertained that all he meant to express was: "that he had his own opinion on the subject", which he would communicate after he had matured it in his own mind. On another occasion, while conversing at a dinner party on general subjects, an observation was made by one of the guests that "some fall down", which appeared to be "a propos", of nothing, so far as could be seen, but it turned out that some one of the party had brushed a piece of bread with his elbow from the table to the floor, and he intended simply to call attention to the fact. Perhaps, however, the climax of all occurred during a discussion on the art collection at one of the museums, when several "learned professors" were present, and the statue of the Graces was mentioned, and in order to make it quite clear to the English perception what particular statue was being referred to, he graphically described it "as what you call in England *the three thanks*".

These mistakes, however, are not limited to conversational remarks, but are occasionally "committed to writing", as a note which I once received, couched in the following terms, will well illustrate, "willu com end dain wig uz en esta sondé o mendé", to which an answer was requested by the bearer. These characters in their mysterious aspect were at first quite unintelligible, but the meaning was soon apparent; it was simply an invitation to dinner "will you come and dine with us on Easter Sunday or Monday".

Instances of such mistakes, written and verbal, might be multiplied indefinitely; but numerous and amusing as they were, I doubt whether they equalled, either in number or absurdity, the mistakes I myself made in the efforts, to express my meaning in Latin, Sarde, and Italian, which I was compelled to make in many places and on many occasions, in order to render myself intelligible; but the Sardes were too courteous to take notice of my imperfections in this respect; a politeness which it may be thought I am ill requiting, but I mean no offence, and none I am sure will be taken.

There are very few recent "works", upon Sardinia and they are mostly written upon special subjects, principally archeological

and historical, and not of much interest to the general public. There are, however, several "guide-books," and "hand-books," in which Sardinia is referred to, and in these sometimes a few pages are grudgingly given to its history and description, but more often it is dismissed in a few sentences and even in a few lines, as if it were scarcely worthy of mention; and yet in the same book whole pages are devoted to places of infinitely less interest and importance, but more in the beaten track of the "conventional tourist," and better known in the "fashionable world."

Very little general information, however, is to be gleaned from any of them, and often the little that is given is imperfectly expressed, and calculated to impart erroneous impressions, sometimes conveyed in such deterrent terms as almost to prevent a visit to the island, and at others, raising expectations which would assuredly be disappointed; and either of these results, in the interest of the island itself, as well as of those who may contemplate a visit, it is obviously desirable to avoid. Some of the most mis-leading of these passages will be shortly referred to, but the books themselves will not be mentioned; the object being not to criticise the works or their authors, but to correct mis-conceptions and mis-apprehensions.

As regards salubrity or rather insalubrity of climate. It is denounced by some as the "*most deadly in the world*," and as if a residence in, or even a visit to, the island were the inevitable prelude to certain death, and by others, not quite such alarmists, it is stated, that April May and June are *the only months when it is possible to travel with comfort or safety.*" Another author, though giving the Island a "bad name," generally, "yet adds," for the remainder "of the year i. e. from November to June (which is the proper "time for strangers) the climate is healthy and delightful," and the old Sarde proverb "*Chi va ad Oristano ad Oristano resta*," is quoted as triumphal proof of insalubrity; but this, like many other Sarde proverbs is signally falsified by facts; the healthy appearance of the inhabitants and the statistics of the place alike demonstrate to the contrary, and, during the construction of the railway, it is well-known that not one of

the staff of engineers and overlookers, who resided in Oristano for several years, was ever attacked by fever or intemperie. There can be no doubt that Sardinia “ enjoys „ a bad reputation as regards climate, but this, as we have seen, is not only greatly exaggerated, but that, with a moderate exercise of care and prudence, the ill effects may be avoided; besides it is not more unhealthy than many other countries, which tourists visit with impunity, and on which no such deterrent comments are made. Indeed Sardinia, for some reason or other, seems almost always to be placed at a disadvantage as compared with other countries; even Corsica, which is in nearly every aspect unquestionably inferior, is held up as infinitely more attractive in all respects; one author, in his enthusiastic comparison, transgresses all bounds, even with reluctance making the admission that Corsica is *rather smaller* than Sardinia, it being in fact not one half as large, either in extent or population.

As regards the forests, the statements are equally contradictory and misleading; one quotation has been before referred to, and we have seen how baseless is the foundation on which it rests, and another makes the sweeping assertion that “ most of the forests are cut down for charcoal „; and as the ilex is the *only* “ forest “ tree „ that is converted into charcoal, it is not only manifestly incorrect as regards “ the forests „ generally, but it is greatly exaggerated as regards the ilex, for there are now upwards of thirty millions of these trees flourishing in the Island. The cork-tree is said by another authority *to yield 30 lbs of bark on the average*. The meaning of this is not quite clear, indeed it might be said to be decidedly obscure; if bark be meant, its value, at the highest computation, would not be 3 shillings, and at this price would not pay for felling and carting, but the average quantity of bark per tree is far nearer 300 lbs than 30. If on the other hand, as is most probable, “ cork „ and not “ bark „ be meant, the average yield is stated at as much over the mark, as the “ bark „ is under; so that altogether no information of much value can be gathered from the statement. Another author observes that “ the mountains are covered from the

„ base to the summit with chestnut, oak, beech and larches „ and no mention is made of cork, ilex, walnut, olives, and many others, which constitute the staple production of the forests, and as a matter of fact, there is not a larch in the whole island, except some „ seedlings „ recently introduced, and now growing in the nurseries at Laconi and Macomer. The most extraordinary statement is however contained in a most popular and much-read book, which records the astounding fact „ that Sardinia has, owing to the total destruction „ of its forests „ to buy its navy timber from the French. „ This is almost ludicrous in its absurdity, for 1^{stly}, Sardinia has no navy and does not therefore require any navy timber; and 2^{dly}, France imports oak largely from Sardinia, and is one of her best customers for timber.

In regard to minerals the accounts are almost as erroneous and contradictory. In one publication it is stated that „ the mines were „ worked by the Romans, but are now exhausted „; and in another, that they are „ intact and undeveloped „; and in a third, that „ mines „ of silver, zinc, lead, antimony and salt are *still* being worked, but „ are *nearly* exhausted „. It has been previously mentioned in detail what mines were worked in former times, and what are now in operation, and from this may be judged, how imperfect a conception these references give of the mineral wealth and resources of the Island; and as to salt, though produced largely by evaporation from sea-water, no salt-mines have ever yet been worked or discovered in Sardinia.

One author mentions the fact that „ 400 mines were worked in the Roman times „, and further that the population „ at that period exceeded 5 millions „, but no authority is given for these statements; and the latter is at complete variance with all ancient writings on the subject, none of which place the number of inhabitants at more than 2 millions, and the former is inconsistent with the historical fact, that the Romans, except for their own special requirements (which were limited), prohibited mining under heavy penalties; and further, there are no evidences in the island of any mining operations at all

approaching in number and magnitude the operations thus indicated. Another modern writer observes. “ It *was* rich in metals, such as “ lead, copper and iron, — the latter has been found at Monte “ Ferro and is *still* to be found in considerable abundance in certain “ districts „. No doubt iron is *still* to be found not only at Monte Ferro but in many other places — but the Island is also *still* rich in lead and in silver manganese and zinc — but it *was never* rich in copper. It would however be almost impossible to convey in such few words a worse description, or give a more inadequate conception, of the mineral wealth of Sardinia, than is expressed in this quotation.

Another well-known and highly appreciated guide-book dis-misses the resources of Sardinia in these words. “ Its mineral “ resources, known to the Romans, who used it as a place of exile, “ are at present untouched. Splendid forests and abundant fisheries „. The “ abandon „ of this summary is charming in its “ *ex cathedra* „ style of arbitrary simplicity. Sardinia might have been a sort of “ Botany Bay „, to judge from the first part of the paragraph, and a virgin country, as regards its forests and fisheries, judging from the latter, and the one is about as near actual facts as the other. Taking it as a whole, however, it is much nearer the truth than the description in another, but less known, work, which tells us that “ its forests are destroyed, its minerals worked out, and its fisheries exhausted. „ These various conflicting accounts may however be safely left to neutralise each other.

The comments on the temperament and habits of the people are equally erroneous and disparaging; they are described “ as dirty, half savage „ and “ somewhat treacherous „ and in another passage they are called „ semi-barbarous „.

These epithets might perhaps once have been with some appropriateness applied, but nothing can be more nnfair to the Sardes of the present day than to be thus stigmatized. Moreover, in the “dark and middle ages„ the Sardinians were far more civilized than the inhabitants of the country, which these same authors claim with pride as their birth-place and home. It is not necessary to refute these

charges in detail, as the various Sarde habits and characteristics have been already referred to, and it will have been seen with how little justice these strictures apply; and what renders these descriptions peculiarly unfair is that there is generally no mention of those characteristics of hospitality and geniality, sobriety and courtesy, for which the Sardes are proverbially distinguished.

The accounts of the "sport," that the Island offers, and of the game that is to be found there, are more amusing from the ignorance they display, than from the mistatements they contain; but they are equally calculated to mislead. Evidently few of the authors are sportsmen,—the phraseology alone betrays that fact—and allowances must therefore be made. One enthusiastic writer declares that "game is abundant in every part of the island," another observes that "strangers coming to the island for sport will certainly not be disappointed," while a third limits the "abundance," so far as regards snipe and wild fowl, to "Ozieri and Cagliari," and wild-boar and deer to "Ala on the Hill;" and a fourth by way of casual parenthesis, adds that "while making excursions through the forests it is not unusual to fall in with herds of deer and moufflon." Now, as a matter of fact game is not "abundant," though "ample for sport," nor do wild-boar and deer "abound," at "Ala on the Hill," wherever that may be, (for I never heard of the place, nor is it marked on any map of the island), nor on any other hill or in any forest in the country. I have certainly no wish to disparage either Ozieri or Cagliari, as the haunts of snipe and wild fowl, but there are dozens of places in the island, where equally good sport of this sort is to be had, and it should not therefore by implication even be limited to these two places; and as regards the "falling in," with herds of deer and moufflon, I have traversed most of the Sardinian forests, and can positively affirm that, except when hunting and accompanied by an army of dogs and beaters, I have never seen either a deer or moufflon. The latter, indeed, never frequent the forests except during the hard-period of a severe winter, and few people make "excursions," in Sardinian forests at that inclement season.

A correspondent of a widely-circulated English sporting paper writes thus. "Sardinia still contains some big game, such as deer, " roebucks, wild boars, wild goats, and the celebrated moufflon; and " *all but the latter* are to be found in the mountainous parts of the " island. " This is singularly inaccurate, for it so happens that there is not a roebuck or wild goat in the island, and the moufflon is *the only one* of the other animals named that *does* frequent the mountains. We are further informed by the same authority that the wild goat is distinguished " by having its horns like the antelope, and " its teeth and jaws of a dull gold colour, and lives only in the Island " of Tavolara on the N. W. coast. " Irrespective of the fact that no such animal exists on the Island of Tavolara, or elsewhere in Sardinian, the terrific aspect so vividly delineated is not imparted by an antelope's horns, and the " dull gold colour of teeth and jaws " is a distinguishing characteristic of most animals, human as well as brute, when they have arrived at a certain age.

The mode of hunting these animals is, according to the same scribe, equally interesting and peculiar. The sportsman is " accompanied by a well-trained dog, with a small bell attached to its " collar. "The dog goes ahead in the woods and thickets, " (I am using the very words) " and when he finds his game points, as " other dogs do, at hares and small game. The *hunter* then approaches, and calls to the dog to start the animal, and fires from " the saddle, following the animal, should the first shot not prove " effectual. " This tissue of absurdities requires correction in every part; as to bells, sporting dogs are never decorated with such appliances in Sardinia and to *see a dog pointing in woods and thickets*, and " calling to him when pointing to start the animal " would be absolutely impossible, unless gifted — as Sam Weller regretted he was not — with unlimited vision equal to " a pair of patent double " million magnifying gas microscopes of hextra power; " and to follow the animal on horseback would puzzle even a Sardinian hunter, and would certainly have brought our own correspondent to " grief " though he treats it so lightly, and seems to think there

is nothing unusual in it. The whole description is, however, a burlesque on sport, reminding one of the letter written by M.^r Sponge — so admirably portrayed by the late M.^r Surtees — which, after its supervision by the lady editor of the newspaper to which it was addressed, so thoroughly disgusted his “popular host,” that the writer, it will be remembered, had to expedite his departure from his hitherto hospitable quarters.

The accounts are equally conflicting and misleading as regards “travelling,” in the Island. In some of these books the roads are described as “few and bad”; in others, as “good and branching in all directions.” The hotels are sometimes said to be “good and comfortable, not only in the cities and towns, but, in most of the larger villages, there are inns, where you are sure of obtaining a clean bed and tolerably good eating”; while another author broadly asserts, that, except in the two capitals there are *no hotels or inns* whatever, and that “the traveller is entirely dependent on the hospitality of the natives.” The true state of things is about mid-way between these statements; the hotel accommodation cannot be said generally to be either abundant or first-rate, but it exists, and is to be found in many other places besides the two capitals, and is certainly not so defective as some of the quotations would imply.

Another writer while referring to the present state of things in the island, observes, as a proof of its great improvement, that “the roads are now safe, except about Nuoro, where the bandits use revolvers.” It is almost impossible to have squeezed more errors into so few words; for there are no bandits either at Nuoro, or any where else in the island, and, when these “gentlemen of the road” existed, they never used revolvers; the weapons resorted to were long-barrelled guns and knives. Not a single specimen, however, of the real bandit is now left in the country; the nearest approach to one, that I ever met with, was an inoffensive old man, *said* to have been formerly addicted to a roving life, but who now herds a few goats on the mountains. I found him seated quietly on a rock, smoking a black pipe, with a long single-barrelled richly

silver-chased gun at his side, and after a friendly conversation, carried on principally by signs and in dog-latin, and supplying him with tobacco and ammunition, of which he had a poor stock, we parted peacefully. On offering him some "wads," taken from my cartridges, he stated, that he never used any "wadding," except the *dry lichen* which hangs from the forest trees in great abundance, and which, he said, *never smouldered after a discharge*: and that, as he had once set a forest on fire, by the use of paper between powder, and bullet, he had never used it since, and would never use it again; a very wise resolution — and evincing far more care and forethought, than is generally shewn by these nomadic shepherds — and which, if universally practised, would have saved many a Sardinian forest from total destruction.

The concluding paragraph in one of these books forms an anti-climax of the whole. The writer, while expatiating on the pleasures and advantages of travelling generally, but not forgetting to specially denounce Sardinia, observes, that "excepting the beauty and magnificence of the scenery, its various antiquities and numerous remains, the interesting manners and customs of the people, and excellent shooting and fishing, *there is nothing to attract the general tourist.*" This may be said almost to answer itself, and forcibly calls to mind the indignant reply of the lady, who, when brought before one of our police courts, in answer to some reflections on her moral character, retorted, that "*barring she was a liar and a thief, no one could say that black was her name.*"

In fairness, however, to the editors of the various books from which these selected passages have been taken, and as some counter-balance to the errors that have been pointed out, it is gratifying to be able to state, that, when speaking of other countries, and when speaking of Sardinia, except on the points referred to, the information given is wonderfully accurate, and the descriptions vivid and interesting; and no doubt in the next editions of the works these mistakes will not be perpetuated.

Having discharged this duty, it now devolves to discharge an-

-other and far more agreeable one, and that is, to acknowledge the many and great obligations I owe to the authors of the various "works" upon Sardinia, that I have had the opportunity of reading. They are not many in number, but they have afforded much pleasure in the perusal, and imparted much useful information as to the past of the island, in its historical archeological and mineralogical aspects, and as to many manners and customs, which formerly prevailed, but have now fallen into desuetude, and live only in the records of these authors, and in the traditions of the people. To General La Marmora, Mr Tyndall, and M. M. Cetti, Gemelli, Manno, Spano, Moris, and Bresciani (not one of whom, I regret to say, is now alive), I feel specially indebted; I have on several occasions adopted their accounts, — sometimes almost their very words — in descriptions not otherwise obtainable, and which no words of mine could so well, or so adequately, have expressed. I not only feel it a pleasing duty to make this acknowledgement, but, should any future writer upon Sardinia consider that any quotations from this volume are worthy of a place in his book, I should regard the selection, not as an artifice for acquiring posthumous fame, but as a tribute of the estimation in which he held the volume and its author.

A last, and still more agreeable, duty has yet to be discharged; an expression of heartfelt thanks for the unbounded kindness courtesy and hospitality which were universally extended to me during my stay in Sardinia. To enumerate the many friends, to whom I am thus indebted, would be almost to name in detail the various Syndics and other public functionaries, and ecclesiastical dignitaries, as well as the principal landed proprietors, agriculturists, mine-owners, manufacturers, and sportsmen in the Island, but I should be wanting in the ordinary feelings of common gratitude if I did not specially thank Signor Calvi — to whom I am peculiarly indebted for much most valuable information respecting mining and other industries, as well as for the unparelled kindness and attention, bestowed by himself and his charming and accomplished bride, on one who was a perfect stranger, during a protracted and tedious

illness, when kindness and attention are most needed and most appreciated; Commandatore Piercy for his generous hospitality at Macomer Bolotona and Laconi, and for much most useful information on agriculture and forestry imparted by himself and his agents (Mess.^{rs} Sanna); the Marchesi of Laconi, Villahermosa, and Sedilo, for many pleasant days of sport and social intercourse; Monsignore Canno, for his antiquarian and traditional communications and hospitable reception under the episcopal roof at Bosa; and the various railway officials, amongst whom I must not forget specially to name, Signori di Tivoli and Guarducci D.^r Addis and Mess.^{rs} Bertlin and Cole. The list indeed, might be almost indefinitely extended, but, I must content myself with saying that from the Island and its people I have brought back, and shall ever retain, the most gratifying reminiscences and pleasing associations, and that to one and all, collectively and individually, I tender my best and warmest thanks.

CHAPTER XVI.

Recapitulation — Historical — Agricultural — Forestal — Mineral — Industrial and Commercial — Education — Colonization — Taxation — Rates and freights — Suggestions — Conclusion.

The promised undertaking has now been fulfilled, and it remains only to append a short recapitulation, with some comments in the present condition of the Country, and some suggestions as to its future developement.

An historical resumé of the Island, from the dark and mythical ages to its annexation with the Roman Empire in the zenith of its power, has been given; and it has been seen, how, on the decline of that Empire, it became a prey to the barbaric hordes, who overran the civilized world, and how it afterwards became the general battle-field of eastern Europe, and was conquered and retaken, and lost and re-conquered, successively by Pisans and Genoese, Giudici and Nobles, French and Arragonese, Spaniards and Austrians, and how at last it came by treaty to the Royal House of Savoy, and eventually became part of the United Kingdom of Italy.

The pre-historic and classic remains have been lightly touched upon, in the unlearned language of one who has no pretensions to antiquarian knowledge, but in no scoffing or unbelieving terms. Agriculture, forests, mines, railways, and the various industries which formed the special subjects of the author's mission to the Island, have been detailed, more fully perhaps — for familiar ground was

being trod — than may have been pleasing to the general reader, for it is not easy to make such subjects amusing or even interesting. The various characteristics, manners, and customs of the people, with their ceremonials and superstitions, have been portrayed in the colours in which they impressed a stranger, who, though he may have painted them in a somewhat light and airy style, yet has done so in no spirit of cynicism or irreverence; while the “*caccia grossa*,” and other national sports have been described “*con amore*,” and here again the author can plead neither ignorance, nor other excuse; for sport in every phase, from his earliest youth, has been a passion, and during a period of “eight lustrums,” he has never omitted any opportunity of taking part in all the sports of every country that he has ever visited.

It will have been observed that under none of the various dynasties, who successively ruled the Island, if we except a portion of the régime of the Giudici, under the gifted Giudicessa Eleonora, were any measures adopted for the improvement of the Island, or the amelioration of its people; and that, from the period of the Roman occupation, Sardinia, instead of progressing, has, during a succession of centuries, been gradually but surely retrograding, in the march of civilization; and that it was not until the Savoy dominion that any improvements were introduced.

Under that Power, however, a wise and liberal policy has been pursued. Measures for the security of life and property have been passed and enforced; the administration of the law has been rendered pure and effective; municipal institutions have been founded; universities have been established, professorships endowed, and arts and sciences encouraged; a new monetary system and a uniform official language have been introduced; national roads and bridges, ports and harbours, have been constructed; forests have been protected, brigandage suppressed and feudalism abolished; museums of antiquities and natural history, and a complete system of universal education, have been established; an effective militia and police force have been organized; chambers of commerce, agriculture, mining, and forestry, have been inaugurated; provincial councils,

with proportionate representation in the Imperial Parliament, have been instituted; and lastly, the means of inter-communication between the mainland, and the chief centres of population and industry in the Island, have been opened by a system of railways recently completed, and now about to be largely extended, and supplemented by a fleet of steamers, liberally subsidized.

These are no small advantages to have been conferred by any Government within the limited period of a few generations, but many of these measures have not yet borne fruit, and many more require to be introduced and adopted, if Sardinia is to regain her ancient position, and perfect her developement in the future.

To whatever height water has once attained it can always be made to reach again, and so it is with the natural resources of a Country, when they have been allowed to "lie fallow," and such is practically the present condition of Sardinia after centuries of neglect and spoliation.

Many and various remedial measures have been suggested, and suggest themselves — almost as numerous and varied as the contributing causes; — and there can be no doubt that no one particular remedy — however drastic or comprehensive — can effect a cure; the evil is too deep-rooted, and of too long standing, to be eradicated by the magical effect of any "nostrum," or "specific," known to political or economic science. The evils are many and various, and so must be the remedies.

Agriculture is the "staple trade," and "main-stay," of the Island, and its extension and improvement are the first and most important objects to be attained. The draining of inland marshes and plains, the embanking of rivers, the planting of trees for the restoration of the rainfall and absorption of malarious exhalations, the construction of reservoirs for the purposes of irrigation, and the extension of roads and railways, ports and harbours, are the chief measures; but, in addition to these physical improvements, there must be a better system of cultivation and harvesting, a concentration of farms, and a more varied culture, accompanied by colonization

on a comprehensive scale, a reduction of fares and freights both by sea and land, and last, but not least in the estimation of the Sardes, a modification and re-adjustment of taxation.

It is not necessary to describe in detail the various physical improvements, as they speak for themselves, and are already receiving attention in Government and official circles, but it may be incidentally mentioned, that the surplus convict labour in the Island — now unused and unproductive — might be utilized for these objects; the other suggestions however require special mention.

A radical change in the mode of cultivation is a first essential; the antiquated implements now used must be changed for more modern appliances; the land must be *ploughed* not the surface only *scratched*; it should also be “cleaned,” and “manured,” not left “dirty,” and neglected; the seed should be sown and harrowed, not scattered hap-hazard, and the top soil lightly touched with an old wooden harrow; the sickle of 2000 years ago must be discarded, and the corn reaped *with* the stalk, and the straw utilized for food and manure, not, as now, the ears only stripped off, and the straw burnt and destroyed; and, for the ancient wasteful and costly custom of “treading out,” the corn, must be substituted economic threshing machines of modern construction.

At present there cannot be said to be any “system of cultivation,” or “rotation of cropping,” unless an occasional “bare fallow,” — a custom long ago exploded, excepting amongst the most old-fashioned of farmers on stiff clay soils, which have no existence in Sardinia, — can be called a “system,” or “rotation.” Manure, either natural or artificial, is seldom applied, either on a green fallow or after successive cereal crops, and it is not to be wondered at, therefore, that, with these accumulated short-comings, the produce per acre should be less than the average of Italy, and much below the average of other agricultural countries. Indeed the wonder is, that the soil and produce, treated as they are, return so kind a response to the rude calls that are made upon them.

Moreover, other crops, besides cereals beans and peas, should

be grown. Sardinia possesses a climate and a soil where fruits of all sorts, and in infinite luxuriance and abundance, might be cultivated to an indefinite extent. Not only vines, figs, almonds, olives, oranges, and lemons, but vegetables and garden produce of every kind and variety might be grown in early spring and late autumn, and either exported "fresh;" or in a "dried," or "preserved," state.

Another and serious draw-back to proper cultivation is the division of farms into a great number of small detached pieces, that in the aggregate constitute the holding. In many cases, a farm of from 15 to 20 hectares (from 35 to 50 acres) comprises between 200 and 300 different pieces or strips of land, scattered over all parts of the commune, some not more than a few yards wide, and 100 yards long, mostly detached, and some of them several miles distant from the rest. Cultivation, under such circumstances, is necessarily carried on under great, and almost insuperable, disadvantages, for not only is the cost of ploughing, sowing, harrowing, reaping, and leading, greatly enhanced, but it is physically impossible to fence in the lands, so as to prevent trespass and damage, or to exercise any proper supervision. The evil too is increasing in extent and magnitude, for, on every death of a proprietor, another subdivision takes place among the heirs, *each* of whom has a right to a share in *each* strip, and unless they can agree among themselves — which they seldom or never can or do, — the loss and inconvenience are always on the increase.

The remedy is not easy of solution, but the evil is great, and the remedy should be found and applied. Whether it would be necessary or politic to resort to extreme measures, and make the periodical concentration of detached lands compulsory, through the instrumentality of some local and independent authority; or whether power should be given to adjoining proprietors to insist on a concentration, where a crotchety or ill-conditioned neighbour acts the part of the "dog in the manger;" or whether it should be made discretionary and permissive, by some simple and inexpensive process, I cannot presume to express any definite opinion; probably

the milder and less arbitrary course would be effectual, and at all events it might be tried first; but that the evil should, by some means or other, be eradicated admits of no doubt or question. Its existence is one of the greatest obstacles to cultivation, and its bad effects are being felt every day, and it should be one of the first evils to be eliminated. In Sardinia too, as in all other agricultural countries, the actual cultivators of the soil and their families *should reside on or near their farms*, and abandon the old system of living in towns and villages, sometimes many hours journey distant from their lands. The draw-backs of the present system would be absurdly ludicrous, if they were not so ruinously serious; a short description of an average day's "work," will be the best illustration.

The farmer or labourer — they are generally identical — leaves home at about six o'clock in the morning, and proceeds at a slow walk, either on foot or on horseback, to the site of his day's "work," the speed never exceeding the safe pace of from 2 $\frac{1}{2}$ to 3 miles per hour; so that if the lands are six miles distant (which is about an average) from town or village, he does not reach his destination till about 8 o'clock. The first operation is then to tie up his horse, if the man has ridden, and this takes some time, as a spot must be selected, where the pasturage within reach of the tethered beast is sufficient for the day's feeding. If the man has walked, a discretionary rest on his own account is necessary, and either occupation absorbs about the same length of time; then he lights a fire — summer and winter — eats his breakfast, and afterwards smokes a pipe, the duration of the last operation depending upon his conscience and his "love of the weed"; at last he commences work, leaving off at midday which he knows with wonderful accuracy by the sun. Then comes the dinner, then another pipe, then a siesta, also of varying duration, according to the conscience and habits of the man; and about this period the horse is taken to drink, and then tethered up again; if water is distant — as is frequently the case — this operation occupies considerable time, and, when it is over, work is again resumed, and continued till such an hour, as will leave time

to accomplish the homeward journey with the necessary ease and comfort, and to arrive back at his own house by about six o'clock; so that, what with the journey there and back, the time taken up in looking after the animal, if he has ridden, or if he has gone on foot, the more time that is devoted to pipes and siestas, to recover from fatigue, and to prepare for the journey home, the consequence is, in either case, that not more than three or four hours of "bona fide" work is actually done to the land itself during the whole day. On the other hand, if the farmers, with their families and labourers, resided on the land, the time and energy consumed on the journeys and accompanying occupations, could be bestowed on "work", and one man could do the labour of two or even three persons; besides having the advantage of the women and children to assist in light work, attending to the cattle and poultry, and acting as safeguards against theft of fruit or produce; the men, too, being always on the spot, could devote their spare time to the improvement of the property, and time is always found for propping or grafting a fruit tree, opening a ditch, repairing a hedge, or a hundred other such operations which, though trifling in themselves, would in the course of the year amount to a considerable aggregate, — especially if a "special journey" had to be undertaken for their performance — and which if left undone, are a source of loss and gradual deterioration of the property. This present system, no doubt, accounts to a great extent for the ragged and neglected appearance of almost all the lands in Sardinia, whether cultivated by the proprietors, or let to others.

There was some reason for this general desertion of the country and concentration in the villages (which are in some parts of the Island several hours journey apart) in the want of public security, which until late years prevailed in the Island, but this cause is entirely removed, and life and property is now as safe in Sardinia, as it is in the environs of Rome Paris or London. The fear of malaria may too perhaps in some cases still act as a deterrent, but in those districts, the residence on the lands might be deferred, till they were drained and brought under cultivation. Agriculturists, as a class, are

naturally “ conservative , and it would take many years before the present cultivators could be induced to abandon their old customs, and live on their farms, unless the palpable advantages of it were put before their eyes. This could be best effected by the examples that would be afforded by “ settlers , from continental Italy, where agriculture is in a more advanced state, and better understood, and this leads to the consideration of the general question of colonization — on which, however, there is great diversity of opinion — as one of the remedies “ prescribed , for the “ recovery , of Sardinia.

The scarcity of population in the Island is an evil which is gradually diminishing, but it is the one great evil, which, at the very outset, most retards Sardinian progress. In warm climates, where the population is sparse, malaria is rampant, and the land is necessarily neglected, and where malaria predominates, the increase of population is slow; thus a vicious circle establishes itself, which must be broken by extraneous means; hence the suggestion of the remedy of colonization, to ensure success of which, however, it is admitted that Government aid is necessary and must be given.

The policy adopted in Canada, and which has proved so eminently successful there, and is the best known way of colonising efficiently and rapidly, with a minimum of expenditure to the State, might be applied to Sardinia with every prospect of success.

The Government owns vast tracts of land in Sardinia, which cost the State more for administration, than they yield in their present condition; these lands might be granted in small lots to intending “ settlers , on condition that they *resided on them*, and *brought certain areas under cultivation within specified periods*, the State preserving “ a lien , upon the lands until the duties undertaken have been fulfilled; and in exceptional cases, as in Canada, the means for building draining and other operations might be supplied under proper safeguards. Under some such arrangement, it cannot be doubted that great numbers of agriculturists would migrate to the Island, from the over-populated districts of northern and central Italy, in preference to facing the risks and dangers to which they are

exposed by settlement in distant lands and under strange skies; they would thus too retain the old associations with their native country intact and unsevered, and this alone with many would be no theoretical consideration; it would decide their destination.

Much good might also be effected by creating a Government fund, from which Sardinian agriculturists, as well those already settled, as intending settlers, could borrow, at a moderate rate of interest, and with a gradual amortisation of the capital, the sums necessary for erecting farm buildings, and draining and improving the lands and the stocking and cultivation of the farms. Such loans could be made on the security of the lands and stock, and might be advanced in instalments by degrees as the works proceeded, and the money was expended, and out of the same fund might also be granted loans under exceptional circumstances on standing crops and produce generally. Some such provision, either directly through Government, or by means of financial corporations, is almost an absolute necessity, as the want of capital amongst Sardinian agriculturists is very general, and without it any substantial immediate improvement is impossible.

Simultaneously with the measures for colonising the Island, and providing indispensable capital, steps ought to be taken to arrest the deterioration in the meteorological condition of the Island, which has already set in through the cutting down of the forests in certain districts without replanting. Large areas have been completely denuded of vegetation, and consequently the meteoric waters run off the lands more rapidly than before; the rivers become more swollen in the rainy season, and are dry at an earlier period in summer, and the slopes of the hills are more easily denuded of soil; whilst at the same time the earthy matter, brought down by the streams when in flood, gradually raises the beds of the rivers, and obstructs their channels, occasioning more frequent over-flows; and the water lies for a longer time on the low-lands, creating new swamps, and increasing the malaria on the arrival of hot weather; moreover the absence of vegetation to attract and retain rain causes longer pe-

riods of drought in the summer, and the earth, becoming parched and heated, causes stronger currents in the atmosphere, which become all the more violent from the absence of trees to temper and retard their motion.

The Government has now in contemplation measures for regulating the course of some of the principal streams, embanking them, and raising weirs to prevent their exhaustion in summer, and provide the means of irrigation, and they have also under consideration the drainage of some of the largest inland lakes; and these measures cannot fail to be of the highest utility in the general regeneration of the Island.

The measures of amelioration, however should not stop at agriculture, all-important as that industry is to the advancement and prosperity of the Island. Industries and manufactures, now languishing and almost " gasping for existence, " should be encouraged, protected, and extended. Mining operations should be conducted upon a better system, and with increased capital; the forests, still standing, should be further protected, and a systematic mode of treatment enforced, and, the making of new plantations should be rendered compulsory where existing forests are cut down. Fisheries should be further developed, and various industries connected with them should be introduced and extended, and other trades and manufactures should be established, so as at all events to meet the requirements of the Island, without importations from other countries of articles that could be produced as well, and at less cost, on the spot, where the raw material is to be found in infinite variety and abundance.

The Sardes themselves scarcely realize the full extent to which many trades, the profits of which might be easily reaped by themselves, are now monopolized by foreigners.

The exports for the year 1880, the latest year of which there are any accurate returns for the whole Island, are of the total aggregate value of nearly 39 million lire, as against imports to the value of 34 millions; shewing an excess of 5 million lire, which is in itself a most satisfactory feature; on an examination however

of the various items it will be seen how many articles of import might be greatly reduced, or altogether expunged from the list, and how largely some of the items of export might be increased.

Wool, to the value of about 1 $\frac{1}{2}$ million lire is yearly sent out of the Island, and woollen goods to the value of nearly two millions are brought back, and, what is more extraordinary, silk goods to nearly the same value are imported, while the quantity of raw silk exported is estimated at only one tenth of that amount.

Leather, tanned and dressed, is bought from foreigners every year to the value of two million lire, while skins, from which the leather is made, and tanning materials, are sold and exported to the extent of three million lire, which would represent more than double that value in a manufactured state.

Fish, fruit, and vegetables, are too insignificant in amount to be represented as separate items of export, and their aggregate value is included in the miscellaneous exports, the whole of which they *ought* to exceed by many millions of lire.

In other respects however these returns are satisfactory and encouraging. Minerals, which fifty years ago appeared in the list of exports amongst the smallest figures, and twenty years ago did not reach one million of lire, now exceed the large total of 12 million lire, nearly one-third of the aggregate exports of the Island. The trade in horses sheep and cattle stands next in value and importance; it now reaches nearly nine million lire, which is ten times as high as it was in 1836, and three times as high as it was twenty years later.

Wheat exhibits but a small increase, and it ought to stand at the head of the list of exports: the increase, however, in fifty years is only half a million lire, on a total of four millions, while during the same period, the *import of breadstuffs* has increased from a mere trifle to nearly two million and a half lire.

Taking, however, the exports and imports in the aggregate, both have shewn a steady and progressive increase, and the increase of each has been nearly in the same proportion. Fifty years ago the exports

and imports were nearly equal, each being valued at about seven millions, the imports rather exceeding the exports; twenty five years later, the figures had nearly doubled, but the proportions had changed, the exports then rather exceeding the imports; and in the last twenty five years the increase has been more than four-fold, the relative figures being 34 millions as against 39 millions, shewing an excess of exports to the value of five millions; a result not only satisfactory in itself, *under all the circumstances*, but clearly demonstrating what *might* and *could* and *ought* to be done in the future.

The various trades and industries thus indicated, would in the aggregate afford profitable employment to many thousands of people, including large numbers of women and children, who are now living in enforced idleness for lack of any suitable occupation; and comparatively little capital would be needed; and it should be borne in mind that capital, though proverbially “sensitive,” is always to be found, when a safe and profitable return may be reasonably relied on.

The heavy cost of transport has until recent times been one of the greatest drawbacks to the advancement of Sardinia, and to some extent it yet exists, but it is capable of easy removal.

All authorities, from Bacon to the political economists of the present day, concur, that cheap and ready means of transport is one of the first essentials to the prosperity of a country, and in Sardinia the making of roads, railways and harbours, and the subsidizing of steamers to unite it to the main-land, and thus effect a continuous chain of direct communication between producer and consumer, are especially essential; and the money thus expended, while directly conducing to the development of Sardinia, will flow back many-fold into the coffers of the State. Great care and consideration are no doubt necessary in the application of the expenditure, but, so long as Italy has such men at the head of affairs as she now has, no fears in this respect need be entertained, and there can be little doubt that they will not let slip the golden opportunity, now that hundreds of kilometres of new railways are to be made, of so co-ordinating the

whole of this expenditure in such a manner as will be most conducive to the public good. Much has been, and is being, done, in Sardinia in this direction; a good and efficient network of public roads, having an aggregate length of several thousand kilometres, is gradually being completed; several hundred kilometres of railway are already opened to the public, and as many more are to be made in the immediate future; large and commodious harbours are in course of construction at the various ports of the Island; and there now remains only to settle the question of the tariffs, which however is of vital importance, but of easy adjustment. It is useless to make railways and harbours and subsidize steamers, and the vast sums already expended will have been virtually wasted, unless proper measures are taken to ensure, that the rates charged are such as to encourage traffic, and, moreover, low rates on the new and branch lines will be useless, if high rates prevail on the main lines, or for harbour dues or sea-carriage. Where commerce is in a nascent state, as in Sardinia and in most parts of Italy, it is essentially necessary to have *low* rates of transport, and Government should not only stipulate for low tariffs on the new lines, but should compel the railway Companies to introduce the reformed tariffs on existing lines; and if there be not the power under their present arrangements, or under the general law to enforce this, the requisite powers should be obtained; and a similar reduction, with similar powers, should be applied to sea-freights and harbour dues.

The rates prevailing in Sardinia, though not in themselves high, are yet high relatively, and, where the surplus of profit is infinitesimally small, as in the case of mineral produce at present prices, a reduction of rates and freights will practically determine the opening or closing of a large majority of mines; as well as the establishment of new industries, especially those connected with the smelting of iron ores, and the manufacture of steel and iron, where the cost of transport of the "raw material," forms an important element in the aggregate cost of production. With reduced tariffs, and regular and cheap sea-service, the produce of Sardinian lands and gardens would

be able to compete, in the markets of the great centres of consumption, with the products of northern and southern Italy and of Sicily, and the fruits and vegetables of Bosa and Oristano would vie on Roman tables with those of Naples and Palermo. At present the freights are such as practically to deter commerce; the charges from Sardinia to the main land being higher than the ordinary freights for crossing the Atlantic. The last tariff, recently published and containing the through rates, shows the freights charged on ordinary general goods from Civitavecchia to Golfo Aranci or vice versâ (a distance of 110 miles) varying from 35 to 42 lire, and for a few favoured articles 24 lire per ton, which are virtually prohibitive.

The importance of the tariff question has already been acknowledged in dealing with the railways of continental Italy and Sicily, and there has been recent legislation in this direction. Sardinia requires and demands similar treatment; without it she can never regain her lost position or even compete in commercial markets with the other Provinces of Italy. If from all other parts of the Kingdom the natural products of the districts can reach the markets and centres of consumption, cheaper than from Sardinia, it is obvious that not only will no fresh capital be attracted into the Island, but the commercial enterprise, now struggling there, will gradually retreat, and seek more favoured localities, where cheaper transports open a wider field, and admit of a greater margin of profits.

According to another learned authority one great drawback to the advancement of Sardinia is the defective state of education in the island, but this, if it ever were an actual drawback, has to a great extent been already remedied by a universal and compulsory system, which has now been in force for several years; it is, however, more than questionable, whether extended education will bring about material prosperity in Sardinia, or whether hitherto it has been an obstacle. Moreover this same authority answers himself, for, in making comparisons with Sicily, which is lauded to the skies to the detriment of Sardinia, he gives the educational statistics of the favoured Island; from which it appears, that at the time he was writing,

out of every 10,000 inhabitants in Sicily, 8578 could neither read nor write; and at the same date in Sardinia the proportion was 8756, being only 178 in 10,000 worse than in Sicily; no great foundation for such a super-structure. The statistics of both are, however, miserable disclosures, but, if the figures are of any value at all, they demonstrate that the material prosperity of a country, as exemplified in the case of Sicily, is not dependent on the educational advancement of its people.

The apathetic temperament of the Sardes has been assigned by others as the reason for the back-ward condition of the country, and this no doubt has to some extent been an obstacle, but this cannot be the true, nor even the main, cause, nor is it quite just to the people. It must be admitted that the Sardes are not as a race either laborious or energetic, and the fatal Sarde saying " what God has given that we will take " is far too often exemplified, but they are not more listless and apathetic than the Sicilians and southern Italians generally, and as, the same causes produce the same effects, the reason is not altogether sound. Besides, it may be truly said, that the Sardes, making due allowance for the climate and other surrounding circumstances, work as hard and continuously, and " throw as much labour into their work " as could be reasonably expected; and, it is not venturing too far to say, that their *average* work will equal that of our average agricultural labourer, and further, that, if some of the best and hardest working of our labouring men were transplanted into Sardinia, their energies would gradually subside from their *North-Western* temperature, and would assimilate themselves in a short time to the Sarde standard. It is only from actual experience that it can be realized, how debilitating is the effect of the enervating climate, the food, and mode of living, on the most robust and energetic constitutions.

The Sardes themselves however assign as the main, indeed as almost the sole, obstacle to their non-advancement, the heavy taxation to which the island is subjected, and no doubt, on agriculture

and the landed interest, this burden does press with hard and undue severity.

Direct taxation amounts altogether to about 7 $\frac{1}{2}$ million lire per annum; of this more than one half (nearly 4 million lire) is derived from the land tax; — another 1 million is from the house tax, and about the same amount from the income tax. In addition to these, are the inland customs, or octroi duties, leviable in the cities and towns on consumable produce, which amount to about another million lire, and also the provincial and communal taxes, the amount of which varies greatly, and cannot be stated with any accuracy.

These various taxes, with export and import duties, are considered by the Sardes as grievously heavy and excessive; but they do not altogether amount to more than 12 million lire per annum, and this is not quite fourteen shillings per head of population, and is less than the rest of Italy, and not one fifth the amount, which, directly and indirectly, the average Englishman has to pay in his own country. It may be said that England, with her vast wealth and enormous commerce, is no fair comparison, and in one sense she is not; but on the other hand Sardinia, compared either as to extent or population, is in her natural resources, far richer than England, while her exports largely exceed her imports, which is exactly the reverse as regards England. It is not however really so much the aggregate fiscal burdens that the Sardes suffer from, or rather complain of, as that taxation presses unduly on the agrarian interest, — an interest which seems at the present time to be equally affected and suffering in most other Countries. It is urged, as an exceptional grievance in Sardinia, that the land tax alone amounts to very nearly one half the "letting value" of the land, which it is estimated is equal to one quarter of the net profit derived from agricultural operations; and this, no doubt, is excessive, and requires re-adjustment and modification. The "agrarian" question, however, affects not only Sardinia, but the whole of Italy, and is now engaging Parliamentary attention. The Sardinians must not expect exceptional legislation,

nor does it seem to be at all probable, in view of the existing state of Italian finance, and the political position of affairs generally, that there can be any general *reduction* of taxation in the present, or for some years to come. In the meantime relief must be sought in some other direction. A comparatively small increase in agricultural produce alone would suffice for payment of this land-tax many times over, and would at the same time enrich the Island itself, as well as contribute to the general wealth and prosperity of the kingdom; and the Sardes should bear in mind, that, if this tax were reduced or abolished, the deficiency, thus created, would have to be made up, and fresh obligations imposed, in some shape or other, and Sardinia might perhaps find herself in a worse position than she is now, and had therefore “ better bear the evils that she has, than fly to others “ that she knows not of „; let her attention be directed to increased productiveness, and reduced freights and her energies concentrated on the means for accomplishing these objects, rather than in efforts to escape an obligation, which would be inappreciable in its present shape under an improved position, and might be re-imposed in a form far more onerous and objectionable.

The efficacy of almost all these measures is, it will be seen, to a great extent dependent on *an increased population*, and this is in fact the ground-work upon which the whole superstructure must stand. No doubt in course of time this result would come naturally, for the tide of population in Sardinia, which had been on the “ ebb „ for so many centuries, is now on the “ flow „. The population, which in 1815 did not exceed 350,000, — scarcely one sixth of what it is said to have been during the Roman occupation, — had in 1840 increased to 524,000, and in 1871 had further increased to 636,600, — equal to an aggregate increase of 85 per cent. In the last decade the increase has been still greater the total number being 680,450, showing an increase of 8 per cent in the ten years and the ratio during the last three years has been still greater; for though there has been no actual census taken since 1881, yet from official information, derived from careful estimates, pub-

-blished since the first part of this book was written, the population is now stated at 706-194 — being an increase of over 4 per cent in the last three years.

The “ tide „ in the Mediterranean generally is, however, very slight, and in Sardinia it is almost imperceptible; and extra force is required to procure any appreciable results. Sardinia *must be colonized*; and when her alluvial plains have been converted into smiling cornfields, and her rich valleys are made the abodes of busy agriculturists, and humanity has re-established itself as in the olden times, then will poverty and malaria transport themselves to more congenial homes, and health and contentment take their places in Sardinia. This is no fancy picture, it is taken from real life in the Kingdom of which Sardinia forms a part; in many districts of continental Italy, in the plains and valleys around Pisa and Leghorn, which at one time were as unproductive and pestilential as the worst swamps of Sardinia, are now amongst the healthiest and most prosperous regions of the Kingdom; and Pisa, in their centre, has become noted as “ a sanatorium „. Sardinia may be made to present the same picture.

In radical circles in Italy there is much patriotic talk about “ Italia irredenta „. If the attention of these political aspirants were turned to the vast tracts of un-cultivated and un-inhabited lands and undeveloped minerals to be found in many parts of Sardinia, from which untold wealth could be produced by private enterprise, aided by proper support and legislation, not only would they secure an ample return for the large sacrifices already made, but they would have effected a forward step towards the material advancement or “ redemption „ of their Country, which would be of far more practical value, than all the grandiloquent declamations of all the various political parties combined.

Many of these improvements, however, and the fortunes of the Island generally, must to a great extent depend on the Sardes themselves. Government may, and no doubt will, perform its part in the future, as it has done in the past, and foreign capital will be

forthcoming in due course, but the Sardinians must do their part; they must discard their old motto of pious resignation, and substitute in its place the words of the Roman poet who 2000 years ago in turn satirized and eulogized their Island, remembering that

Paulum sepultæ distat inertiae celata virtus.

and they must bear in mind that "God helps those that help themselves," and that the "ten talents" entrusted to them must be employed, not hidden; and lastly when it is considered, what great natural advantages the Sardinians possess, in an unrivalled climate, a fertile soil, extensive forests, rich minerals, and prolific fisheries, it would be almost heretical not to believe, that a country, so bountifully endowed with every gift of nature, and associated in its past history with the greatest and most civilized of nations, and now forming part of a united kingdom which has an equally high destiny before it, will never rest satisfied until she has vindicated her lost opportunities, abandoned her traditional apathy, and regained her former position, by acquiring her full share of what the world, as now constituted, most highly prizes, and which is the acknowledged standard of all worth viz: *Wealth*; without which no nation or individual ever achieved power or greatness, and with which there is no height of ambition that may not be reached.

FINIS



Heraldic arms of Sardinia.

TABLE OF CORRECTIONS

| | | | |
|------|------|----------|----------------------------------|
| PAGE | 14. | line 20. | after Emanuel insert and. |
| " | 30. | " 18. | substitute slight for sligh. |
| " | 36. | " 8. | — exhalations — for exhalation. |
| " | " | " 22. | — wonderfully — for wunderfully. |
| " | " | " 28. | — tending — for ending. |
| " | 72. | " 15. | strike out — per cent — twice. |
| " | 80. | " 16. | — autumn — for spring. |
| " | 101. | " 13, | strike out — would is. |
| " | 102. | " 19. | strike out — was. |
| " | 103. | " 20. | substitute of for ot. |
| " | " | " 27. | — evading — for eveding. |
| " | 112. | " 1. | — 500,000 — for 200,000. |
| " | 121. | " 8. | — exhausted — for exhansted. |
| " | " | " 29. | — half for all. |







